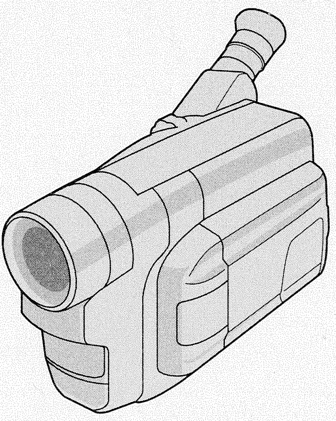
JVC

SERVICE MANUAL

COMPACT VHS CAMCORDER

GR-SXM26EG/EK/SXM46EG



SVHSC *VHS PAL 625

Super VHS*

Super VHS ET*

SPECIFICATIONS *(The specifications shown partain specifically to the model GR-SXM26EG/SXM46EG)*

Camcorder

General

Format	S-VHS /VHS PAL standard
Power source	DC 6.0 V ⎓
Power consumption	
LCD monitor* off, viewfinder on	4.2 W
LCD monitor on, viewfinder off	4.6 W
LCD monitor on, viewfinder on	5.2 W
Video light	3.0 W
Signal system	PAL-type
Video recording system	
Luminance	FM recording
Color	Converted sub-carrier direct recording Conforms to VHS standard
Cassette	SVHSC / VHSC cassette
Tape speed	23.39 mm/sec.
Recording time (max.)	60 minutes (with EC -60 cassette)
Operating temperature	0°C to 40°C
Operating humidity	35% to 80%
Storage temperature	–20°C to 50°C
Weight	Approx. 900 g (GR-SXM46) Approx. 890 g (GR-SXM26)
Dimensions (W x H x D)	198 mm x 119 mm x 99 mm (with the LCD monitor closed and with the viewfinder fully tilted downward)
Pickup	1/4" format CCD
Lens	F1.6, f = 3.9 to 62.4 mm, 16:1 power zoom lens with auto iris and macro control, filter diameter 40.5 mm
Viewfinder	Electronic viewfinder with 0.5" black/white CRT
White balance adjustment	Auto/Manual adjustment
LCD monitor	3" diagonally measured, LCD panel/TFT active matrix system (GR-SXM46) 2.5" diagonally measured, LCD panel/TFT active matrix system (GR-SXM26)
Speaker	Monaural

Connectors

JLIP	ø3.5 mm, 4-pole, mini-head jack (compatible with RC-5325 plug)
Video	1 V (p-p), 75 Ω unbalanced, analogue output (via Video output connector)
Audio	300 mV (rms), 1 kΩ analogue output (via Audio output connector)
S-Video	**Y** : 1 V (p-p), 75 Ω, analogue output **C** : 0.29 V (p-p), 75 Ω, analogue output

AC Power Adapter/Charger AA-V16EG

Power requirement	AC 110 V to 240 V∼, 50 Hz/60 Hz
Power consumption	23 W
Output	
Charge	DC 8.5 V ⎓ , 1.3 A
VTR	DC 6.3 V ⎓ , 1.8 A
Charging system	Constant current, peak detection, timer controlled
Dimensions (W x H x D)	125 mm x 42 mm x 68 mm
Weight	Approx. 250 g

Optional Accessories

- **Battery Packs BN-V12U, BN-V20U, BN-V856U**
- **Car Battery Charger BH-V3E**
- **Compact S-VHS (SVHSC) Cassettes SE-C45/30**
- **Compact VHS (VHSC) Cassettes EC-60/45/30**
- **Remote Control Unit RM-V700U**
- **Active Carrying Bag CB-V7U**
- **Cassette Adapter C-P7U**

Some accessories are not available in some areas. Please consult your nearest JVC dealer for details on accessories and their availability.

E & O.E. Design and specifications subject to change without notice.

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The following table lists the differing points between Models GR-SXM26EG, GR-SXM26EK and GR-SXM46EG in this series.

	GR-SXM26EG	GR-SXM26EK	GR-SXM46EG
BODY COLOR	PEARL GRAY	PEARL GRAY	LIGHT GOLD
MONITOR	2.5"	2.5"	3"
ZOOM	50X	50X	160X
SNAP SHOT	NOT USED	NOT USED	USED
5 SEC REC BUTTON	USED	USED	NOT USED
STILL	NORMAL (NOISE)	NORMAL (NOISE)	FINE STILL
RCU	OPTION	OPTION	PROVIDE
AC ADAPTER/CHARGER	AA-V16EG	AA-V16EK	AA-V16EG

Important Safety Precautions

Prior to shipment from the factory, JVC products are strictly inspected to conform with the recognized product safety and electrical codes of the countries in which they are to be sold. However, in order to maintain such compliance, it is equally important to implement the following precautions when a set is being serviced.

●Precautions during Servicing

1. Locations requiring special caution are denoted by labels and inscriptions on the cabinet, chassis and certain parts of the product. When performing service, be sure to read and comply with these and other cautionary notices appearing in the operation and service manuals.

2. Parts identified by the ⚠ symbol and shaded (▨) parts are critical for safety.
   Replace only with specified part numbers.
   Note: Parts in this category also include those specified to comply with X-ray emission standards for products using cathode ray tubes and those specified for compliance with various regulations regarding spurious radiation emission.

3. Fuse replacement caution notice.
   Caution for continued protection against fire hazard.
   Replace only with same type and rated fuse(s) as specified.

4. Use specified internal wiring. Note especially:
   1) Wires covered with PVC tubing
   2) Double insulated wires
   3) High voltage leads

5. Use specified insulating materials for hazardous live parts. Note especially:
   1) Insulation Tape   3) Spacers   5) Barrier
   2) PVC tubing   4) Insulation sheets for transistors

6. When replacing AC primary side components (transformers, power cords, noise blocking capacitors, etc.) wrap ends of wires securely about the terminals before soldering.

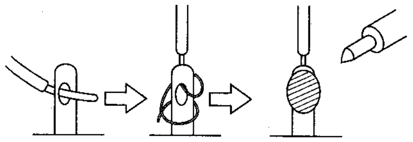


Fig.1

7. Observe that wires do not contact heat producing parts (heatsinks, oxide metal film resistors, fusible resistors, etc.)

8. Check that replaced wires do not contact sharp edged or pointed parts.

9. When a power cord has been replaced, check that 10-15 kg of force in any direction will not loosen it.

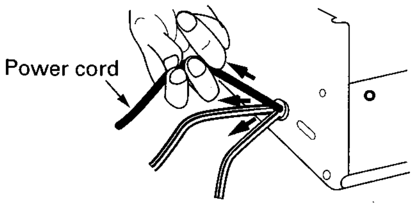


Fig.2

10. Also check areas surrounding repaired locations.

11. Products using cathode ray tubes (CRTs)
    In regard to such products, the cathode ray tubes themselves, the high voltage circuits, and related circuits are specified for compliance with recognized codes pertaining to X-ray emission. Consequently, when servicing these products, replace the cathode ray tubes and other parts with only the specified parts. Under no circumstances attempt to modify these circuits. Unauthorized modification can increase the high voltage value and cause X-ray emission from the cathode ray tube.

12. Crimp type wire connector
    In such cases as when replacing the power transformer in sets where the connections between the power cord and power transformer primary lead wires are performed using crimp type connectors, if replacing the connectors is unavoidable, in order to prevent safety hazards, perform carefully and precisely according to the following steps.

    1) **Connector part number :** E03830-001
    2) **Required tool :** Connector crimping tool of the proper type which will not damage insulated parts.
    3) **Replacement procedure**
       (1) Remove the old connector by cutting the wires at a point close to the connector.
       Important : Do not reuse a connector (discard it).

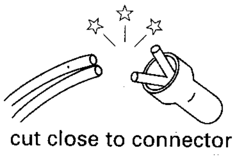


Fig.3

(2) Strip about 15 mm of the insulation from the ends of the wires. If the wires are stranded, twist the strands to avoid frayed conductors.

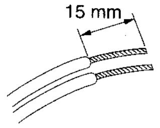


Fig.4

(3) Align the lengths of the wires to be connected. Insert the wires fully into the connector.

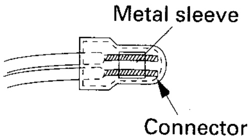


Fig.5

(4) As shown in Fig.6, use the crimping tool to crimp the metal sleeve at the center position. Be sure to crimp fully to the complete closure of the tool.

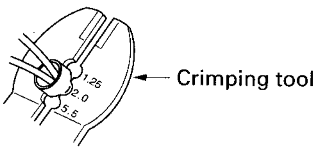


Fig.6

(5) Check the four points noted in Fig.7.

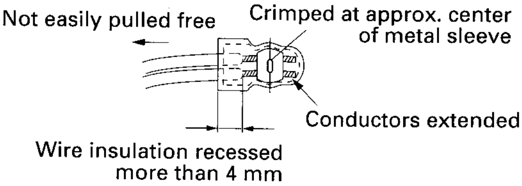

Not easily pulled free
Crimped at approx. center of metal sleeve
Conductors extended
Wire insulation recessed more than 4 mm

Fig.7

● Safety Check after Servicing

Examine the area surrounding the repaired location for damage or deterioration. Observe that screws, parts and wires have been returned to original positions, Afterwards, perform the following tests and confirm the specified values in order to verify compliance with safety standards.

1. **Insulation resistance test**
   Confirm the specified insulation resistance or greater between power cord plug prongs and externally exposed parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 below.

2. **Dielectric strength test**
   Confirm specified dielectric strength or greater between power cord plug prongs and exposed accessible parts of the set (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.). See table 1 below.

3. **Clearance distance**
   When replacing primary circuit components, confirm specified clearance distance (d), (d') between soldered terminals, and between terminals and surrounding metallic parts. See table 1 below.

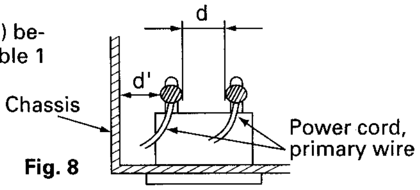


Fig. 8

4. **Leakage current test**
   Confirm specified or lower leakage current between earth ground/power cord plug prongs and externally exposed accessible parts (RF terminals, antenna terminals, video and audio input and output terminals, microphone jacks, earphone jacks, etc.).
   Measuring Method : (Power ON)
   Insert load Z between earth ground/power cord plug prongs and externally exposed accessible parts. Use an AC voltmeter to measure across both terminals of load Z. See figure 9 and following table 2.

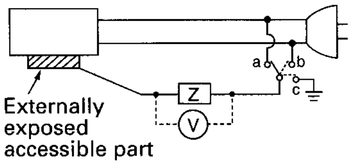


Fig. 9

5. **Grounding (Class I model only)**
   Confirm specified or lower grounding impedance between earth pin in AC inlet and externally exposed accessible parts (Video in, Video out, Audio in, Audio out or Fixing screw etc.).
   Measuring Method:
   Connect milli ohm meter between earth pin in AC inlet and exposed accessible parts. See figure 10 and grounding specifications.

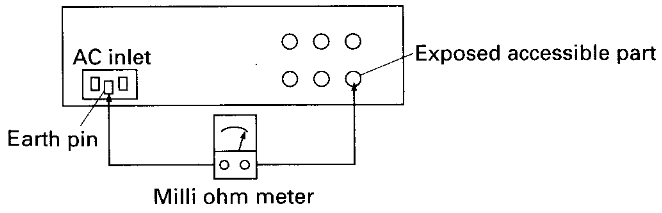


Fig. 10

Grounding Specifications

Region	Grounding Impedance (Z)
USA & Canada	Z ≦ 0.1 ohm
Europe & Australia	Z ≦ 0.5 ohm

AC Line Voltage	Region	Insulation Resistance (R)	Dielectric Strength	Clearance Distance (d), (d')
100 V	Japan	R ≧ 1 MΩ/500 V DC	AC 1 kV 1 minute	d, d' ≧ 3 mm
100 to 240 V			AC 1.5 kV 1 miute	d, d' ≧ 4 mm
110 to 130 V	USA & Canada	1 MΩ ≦ R ≦ 12 MΩ/500 V DC	AC 1 kV 1 minute	d, d' ≧ 3.2 mm
110 to 130 V 200 to 240 V	Europe & Australia	R ≧ 10 MΩ/500 V DC	AC 3 kV 1 minute (Class Ⅱ) AC 1.5 kV 1 minute (Class Ⅰ)	d ≧ 4 mm d' ≧ 8 mm (Power cord) d' ≧ 6 mm (Primary wire)

Table 1 Specifications for each region

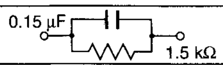
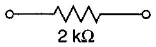
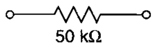
AC Line Voltage	Region	Load Z	Leakage Current (i)	a, b, c
100 V	Japan	1 kΩ	i ≦ 1 mA rms	Exposed accessible parts
110 to 130 V	USA & Canada	 0.15 µF 1.5 kΩ	i ≦ 0.5 mA rms	Exposed accessible parts
110 to 130 V 220 to 240 V	Europe & Australia	 2 kΩ	i ≦ 0.7 mA peak i ≦ 2 mA dc	Antenna earth terminals
		 50 kΩ	i ≦ 0.7 mA peak i ≦ 2 mA dc	Other terminals

Table 2 Leakage current specifications for each region

Note: These tables are unofficial and for reference only. Be sure to confirm the precise values for your particular country and locality.

INSTRUCTIONS (This instruction manual is for the GR-SXM26EG/SXM46EG)

Dear Customer,
Thank you for purchasing the JVC Compact VHS camcorder. Before use, please read the safety information and precautions contained in the following pages to ensure safe use of this product.

Using This Instruction Manual
- All major sections and subsections are listed in the Table Of Contents on the cover.
- Notes appear after most subsections. Be sure to read these as well.
- Basic and advanced features/operation are separated for easier reference.

It is recommended that you . . .
.... refer to the Index (☞ pgs. 50 – 53) and familiarize yourself with button locations, etc. before use.
.... read thoroughly the Safety Precautions. They contain extremely important information regarding the safe use of this product.

You are recommended to carefully read the cautions on pages 54 – 56 before use.

SAFETY PRECAUTIONS

WARNING:
TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

Caution on Replaceable lithium battery
The battery used in this device may present a fire or chemical burn hazard if mistreated.
Do not recharge, disassemble, heat above 100°C or incinerate.
Replace battery with Panasonic (Matsushita Electric), Sanyo, Sony or Maxell CR2025.
Danger of explosion or Risk of fire if the battery is incorrectly replaced.
- ■ Dispose of used battery promptly.
- ■ Keep away from children.
- ■ Do not disassemble and do not dispose of in fire.

CAUTIONS:
- ■ To prevent shock, do not open the cabinet. No user serviceable parts inside. Refer servicing to qualified personnel.
- ■ When you are not using the AC Power Adapter/Charger for a long period of time, it is recommended that you disconnect the power cord from AC outlet.

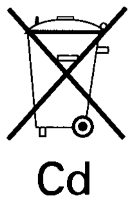
NOTES:
- *The rating plate (serial number plate) and safety caution are on the bottom and/or the back of the main unit.*
- *The rating information and safety caution of the AC Power Adapter/Charger are on its bottom.*

S-VHS C 625* VHS C PAL

Cassettes marked "S-VHS C" and "VHS C" can be used with this camcorder.
However, S-VHS recordings are possible* only with cassettes marked "S-VHS C".
*GR-SXM46/SXM26/SX41/SX21 only.

This camcorder is designed to be used with PAL-type colour television signals. It cannot be used for playback with a television of a different standard. However, live recording and LCD monitor*/viewfinder playback are possible anywhere. Use the BN-V11U/V12U/V20U battery packs and, to recharge them, the provided multi-voltage AC Power Adapter/Charger. (An appropriate conversion adapter may be necessary to accommodate different designs of AC outlets in different countries.)
*GR-SXM46/SXM26/FXM16/FXM161 only.

Crossed Out Dust Bin Mark



- ■ The Crossed Out Dust Bin Mark on the battery pack indicates that the product complies with Directives 91/157/EEC and 93/86/EEC.
- ■ Nickel-Cadmium (Ni-Cd) battery pack must be recycled or disposed of properly.

When the equipment is installed in a cabinet or on a shelf, make sure that is has sufficient space on all sides to allow for ventilation (10 cm or more on both sides, on top and at the rear).

Do not block the ventilation holes.
(If the ventilation holes are blocked by a newspaper, or cloth etc. heat may not be able to get out.)

No naked flame sources, such as lighted candles, should be placed on the apparatus.

When discarding batteries, environmental problems must be considered and local rules or laws governing the disposal of these batteries must be followed strictly.

The apparatus shall not be exposed to dripping or splashing.

Do not use this equipment in a bathroom or places with water.
Also do not place any containers filled with water or liquids (such as cosmetics or medicines, flower vases, potted plants, cups etc.) on top of this unit.
(If water or liquid is allowed to enter this equipment, fire or electric shock may be caused.)

MAJOR FEATURES

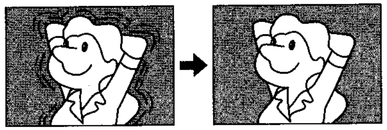
Integrated Auto Light (GR-SXM46/SXM26/SX41/ FXM161 only) (☞ pg. 20)

Program AE with Special Effects (☞ pg. 23)
- Electronic Fog Filter
- ND Effect
- Sepia
- Twilight
- Sports
- Nega/Posi
- 1/2000 sec. High Speed Shutter

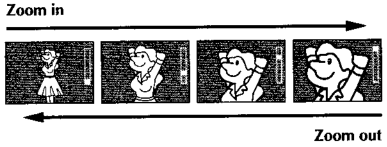
Super VHS-ET (GR-SXM46/ SXM26/SX41/SX21 only) (☞ pg. 12)

TBC (Time Base Corrector) (☞ pg. 34)

Picture Stabilizer (☞ pg. 18)



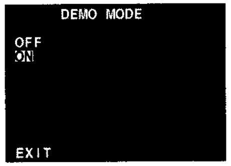
Digital Hyper Zoom (☞ pg. 18)



NOTES about Automatic Demonstration

Automatic Demonstration takes place when "DEMO MODE" is set to "ON" (factory-preset).

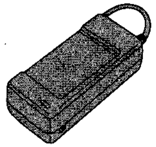
- *Available when the Power Switch is set to "AUTO" or "PRO.".*
- *Operating the Power Zoom Lever during the demonstration stops the demonstration temporarily. If the Power Zoom Lever is not moved for more than 1 minute after that, the demonstration will resume.*
- *"DEMO MODE" remains "ON" even if the camcorder power is turned off.*
- *To cancel Automatic Demonstration, set the Power Switch to "PRO." and press* **MENU** *while the demo is in progress. This takes you directly to the demo mode's Setting Menu (so you will not have to go through the main Menu Screen.) Rotate the Select Wheel to select "OFF" and press it.*

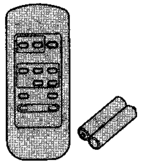


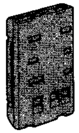
Setting Menu

NOTE:
When a tape whose Erase Protection tab is in the position that allows recording is loaded in the camcorder, demonstration is not available.

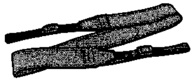
PROVIDED ACCESSORIES


- AC Power Adapter/ Charger AA-V16EG


- Remote Control Unit RM-V715U (GR-SXM46/SX41 only)

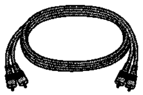

- Battery Pack BN-V11U

- Cable Adapter (GR-SXM46/SXM26/ SX41/SX21 only)


- Shoulder Strap

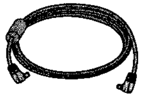
- Lithium Battery CR2025 (for clock operation)

- Core Filter (for provided Audio/Video cable)


- Audio/Video (A/V) cable

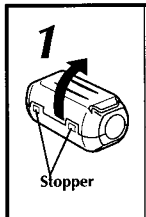
- S-video cable (GR-SXM46/SXM26/ SX41/SX21 only)

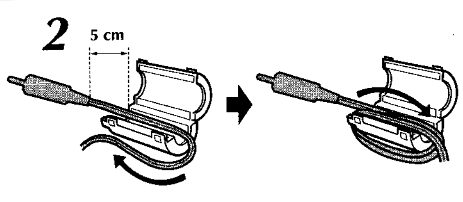
- Editing Cable (GR-SXM46/SX41 only)

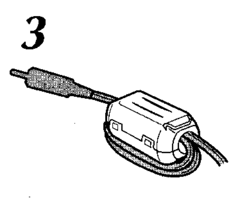

- DC Cord

How to Attach The Core Filter

Attach the provided Core Filter to the provided Audio/Video cable.
The Core Filter reduces interference.

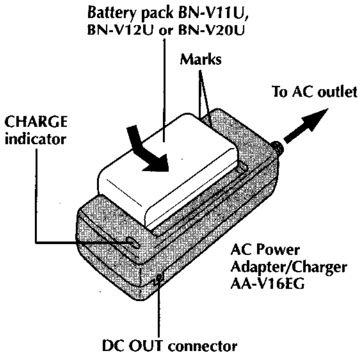




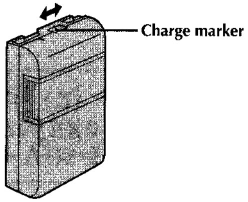


1. Release the stoppers on both ends of the Core Filter.
2. Run the cable through the Core Filter, leaving approx. 5 cm of cable between the cable plug and the Core Filter. Wind the cable around the outside of the Core Filter as shown in the illustration.
   - Wind the cable so that it is not slack.

   NOTE:
   Take care not to damage the cable.
3. Close the Core Filter until it clicks shut.
   Connect the end of the cable with the Core Filter to the camcorder.


Battery pack BN-V11U, BN-V12U or BN-V20U
Marks
To AC outlet
CHARGE indicator
AC Power Adapter/Charger AA-V16EG
DC OUT connector

Battery pack	Charging time
BN-V11U	approx. 1 hr. 10 min.
BN-V12U (optional)	approx. 1 hr. 10 min.
BN-V20U (optional)	approx. 1 hr. 50 min.



ATTENTION:

Charging a battery with some charge remaining reduces that battery's capacity. Perform the procedure below to fully discharge the battery pack before recharging.

1. Attach the battery pack to the camcorder and make sure a cassette is ***not*** inserted, then set the Power Switch to "AUTO" or "PRO.".
2. The camcorder power turns off automatically when discharging is complete.

When you are not using a battery pack for a long period of time, be sure to fully discharge it before storing because leaving a battery with some charge left over also reduces performance.

Power

This camcorder's 3-way power supply system lets you choose the most appropriate source of power. Do not use provided power supply units with other equipment.

CHARGING THE BATTERY PACK

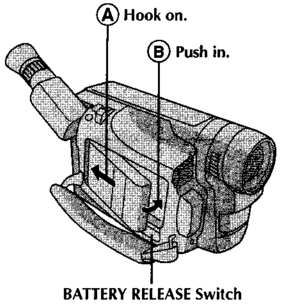
1. Make sure you unplug the camcorder's DC cord from the AC Power Adapter/Charger. Plug the AC Adapter/ Charger's power cord into an AC outlet.
2. Align the marks and slide the battery pack in the direction of the arrow until it locks in place. The CHARGE indicator begins blinking to indicate charging has started.
3. When the CHARGE indicator stops blinking but stays lit, charging is finished. Slide the battery in the opposite direction of the arrow and lift off. Remember to unplug the AC Adapter/Charger's power cord from the AC outlet.

Charge Marker

A charge marker is provided on the battery pack to help you remember whether it has been charged or not. Two colours are provided (red and black)—you choose which one means charged and which means discharged.

NOTES:

- *Perform charging where the temperature is between 10° and 35°C. 20° to 25°C is the ideal temperature range for charging. If the environment is too cold, charging may be incomplete.*
- *Charging times noted above are for a fully discharged battery pack.*
- *Charging time varies according to the ambient temperature and the status of the battery pack.*
- *To avoid interference with reception, do not use the AC Power Adapter/Charger near a radio.*
- *If you connect the camcorder's DC cord to the adapter during battery charging, power is supplied to the camcorder and charging stops.*
- *Since the AC Power Adapter/Charger processes electricity internally, it becomes warm during use. Be sure to use it only in well-ventilated areas.*
- *When charging the battery pack for the first time or after a long storage period, the CHARGE indicator may not light. In this case, remove the battery pack from the AC Power Adapter/Charger, then try charging again.*
- *If the battery operation time remains extremely short even after having been fully charged, the battery is worn out and needs to be replaced. Please purchase a new one.*
- *Remember to set the charge marker after charging a battery pack or after detaching a discharged one from your camcorder.*

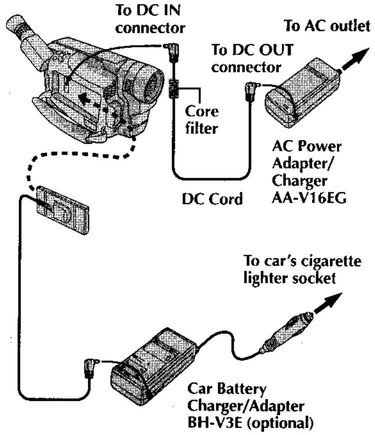


ATTENTION:

Before detaching the power source, make sure that the camcorder's power is turned off. Failure to do so can result in a camcorder malfunction.

INFORMATION:

VU-V856KIT is a set composed of the BN-V856U battery pack and AA-V80EG AC Power Adapter/Charger.
Read the VU-V856KIT's instruction manuals before using.
It is impossible to charge the BN-V856U battery pack using the provided AC Power Adapter/ Charger. Use the optional AA-V80EG AC Power Adapter/Charger.


To DC IN connector
To AC outlet
To DC OUT connector
Core filter
AC Power Adapter/ Charger AA-V16EG
DC Cord
To car's cigarette lighter socket
Car Battery Charger/Adapter BH-V3E (optional)

USING THE BATTERY PACK

Hook its end to the camcorder Ⓐ and push the battery pack in until it locks in place Ⓑ.

- If the battery pack is attached in the wrong position, a malfunction may occur.

To Detach The Battery Pack . . .

.... slide **BATTERY RELEASE** and pull out the battery pack.

Approximate recording time (unit: min.)

Battery pack	LCD monitor off/ Viewfinder on		LCD monitor on/ Viewfinder off	LCD monitor on/ Viewfinder on
	①	②	①	①
BN-V11U	90 (45)	100 (50)	80 (45)	70 (40)
BN-V12U (optional)	90 (45)	100 (50)	80 (45)	70 (40)
BN-V20U (optional)	140 (80)	165 (90)	130 (75)	115 (70)
BN-V856U (optional)	570 (330)	650 (360)	520 (310)	460 (290)

① When using GR-SXM46/SXM26/FXM16/FXM161
② When using GR-SX41/SX21/FX11
( ) : when the video light is on (GR-SXM46/SXM26/SX41/ FXM161 only).

NOTES:

- *Recording time is reduced significantly under the following conditions:*
  - *Zoom or Record-Standby mode is engaged repeatedly.*
  - *The LCD monitor is used repeatedly (GR-SXM46/ SXM26/FXM16/FXM161 only).*
- *Before extended use, it is recommended that you prepare enough battery packs to cover 3 times the planned shooting time.*

USING AC POWER

Use the AC Power Adapter/Charger (connect as shown in the illustration).

NOTES:

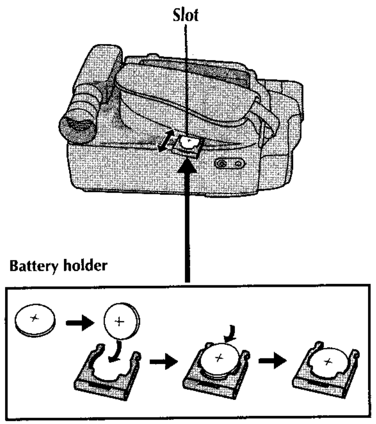
- *The provided AC Power Adapter/Charger features automatic voltage selection in the AC range from 110 V to 240 V.*
- *For other notes, ☞ pg. 6.*

USING A CAR BATTERY

Use the optional Car Battery Charger/Adapter (connect as shown in the illustration).

NOTES:

- *When using the car battery, leave the engine idling.*
- *The optional Car Battery Charger (BH-V3E) can also be used to charge the battery pack (except BN-V20U/ V856U).*
- *When using the optional Car Battery Charger, refer to the respective instruction booklet.*



Clock (Lithium) Battery Insertion/Removal

This battery is necessary for clock operation and to perform date/time settings.

1 Switch off the unit's power and remove the power supply unit (battery pack, AC Power Adapter/Battery Charger, etc.).

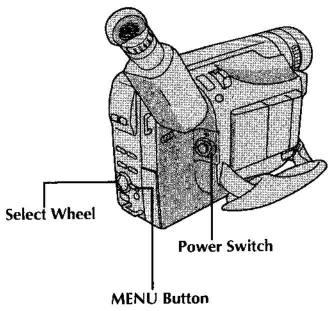
2 Pull out the battery holder to remove it from the camcorder.

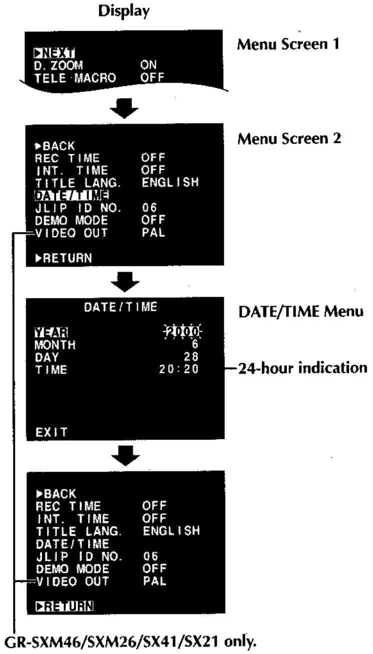
3 Insert the battery in the holder, and be sure to have the "+" mark visible.

4 Slide the holder back into the slot until you hear a click.

NOTES:

- *See "SAFETY PRECAUTIONS" (☞ pg. 2) for information on safe handling of lithium batteries.*
- *To avoid losing the battery and/or battery holder, place the camcorder with the grip side up as shown in the illustration when inserting/removing the battery.*





```
▶NEXT
D. ZOOM        ON
TELE MACRO     OFF
```

```
▶BACK
REC TIME       OFF
INT. TIME      OFF
TITLE LANG.    ENGLISH
DATE/TIME
JLIP ID NO.    06
DEMO MODE      OFF
VIDEO OUT      PAL

▶RETURN
```

```
        DATE/TIME
YEAR                 2000
MONTH                   6
DAY                    28
TIME                20:20



EXIT
```

```
▶BACK
REC TIME       OFF
INT. TIME      OFF
TITLE LANG.    ENGLISH
DATE/TIME
JLIP ID NO.    06
DEMO MODE      OFF
VIDEO OUT      PAL

▶RETURN
```

GR-SXM46/SXM26/SX41/SX21 only.

Date/Time Settings

1 Set the Power Switch to "PRO.". The power lamp comes on.

2 Press **MENU**. The Menu Screen appears.

3 Rotate the Select Wheel to move the highlight bar to "NEXT" in Menu Screen 1 and press it to display Menu Screen 2. Then, rotate it to move the highlight bar to "DATE/TIME" and press it. The DATE/TIME Menu appears.
- To return to the previous settings, rotate the Select Wheel to move the highlight bar to "EXIT" and press it, then go to step **7**.
- To set only the time without changing the date, go to step **5**.

4 To set "YEAR", "MONTH" or "DAY", rotate the Select Wheel to move the highlight bar to the desired item, and press it. When the setting begins blinking, rotate the Select Wheel until the correct setting appears and then press it. The setting stops blinking.
Repeat for other date settings.

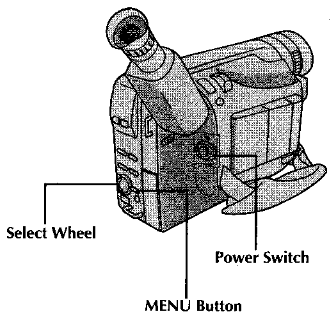
5 Rotate the Select Wheel to move the highlight bar to "TIME" and then press it. When the hour setting begins blinking, rotate the Select Wheel until the correct setting appears and then press it. When the hour setting stops blinking and the minute setting begins blinking, rotate the Select Wheel until the correct setting appears and then press it. The minute setting stops blinking.

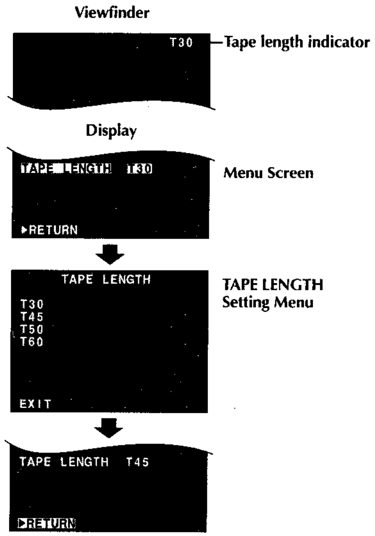
6 When none of these settings ("YEAR", "MONTH", "DAY", "TIME") blinks, rotate the Select Wheel to move the highlight bar to "EXIT", and press it. The Menu Screen reappears with the highlight bar on "RETURN".

7 Press the Select Wheel to close the Menu Screen.

NOTE:

To display the date and time in the camcorder's display and on a connected TV, see "Date/Time Insert" (☞ pg. 27).


Select Wheel
Power Switch
MENU Button


Viewfinder
T30
Tape length indicator
Display
TAPE LENGTH T30
▶RETURN
Menu Screen
TAPE LENGTH
T30
T45
T50
T60
EXIT
TAPE LENGTH Setting Menu
TAPE LENGTH T45
▶RETURN

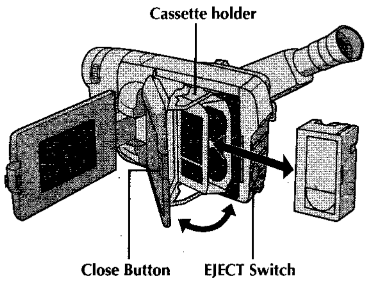
Tape Length Setting

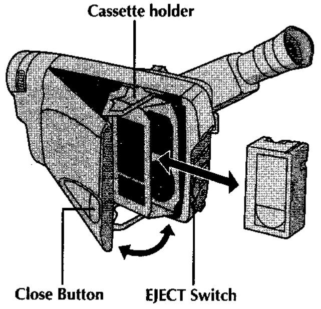
Set the tape length according to the length of the tape used.

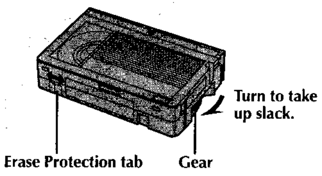
1. Set the Power Switch to "PRO.", then press **MENU**.
2. Rotate the Select Wheel to move the highlight bar to "TAPE LENGTH", then press it. The TAPE LENGTH Setting Menu appears.
3. Rotate the Select Wheel to move the highlight bar to the correct tape length setting. T30=30 minutes of recording time, T45=45 minutes, T50=50 minutes and T60=60 minutes.
   - To return to the previous setting, rotate the Select Wheel to move the highlight bar to "EXIT".
4. Press the Select Wheel. The Menu Screen reappears with the highlight bar on "RETURN". Press the Select Wheel again to close the Menu Screen.

NOTE:

The tape remaining time (☞ pg. 16) displayed in the viewfinder is correct only if the correct tape length has been selected.


Cassette holder
Close Button
EJECT Switch


Cassette holder
Close Button
EJECT Switch

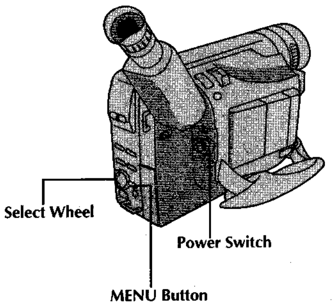

Turn to take up slack.
Erase Protection tab
Gear

Loading/Unloading A Cassette

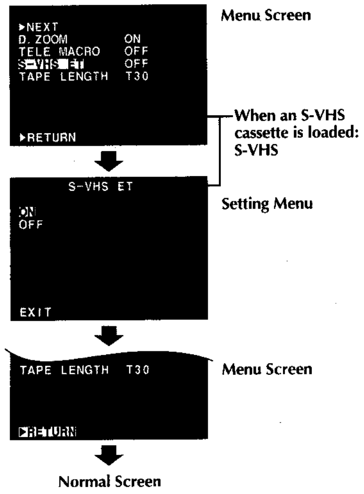
1. Open the LCD monitor fully (GR-SXM46/SXM26/FXM16/FXM161 only).
2. Slide **EJECT** until the cassette holder opens. Do not use force to open.
3. Insert or remove a cassette. When inserting, make sure the label is facing outward.
4. Press the Close button to close the cassette holder until it locks into place.
5. Close the LCD monitor (GR-SXM46/SXM26/FXM16/FXM161 only).

NOTES:

- *Closing the LCD monitor while the cassette holder is still open may cause damage to the LCD monitor (GR-SXM46/SXM26/FXM16/FXM161 only).*
- *The cassette holder can't be opened unless a power supply is attached.*
- *Make sure that the tape is not slack when loading the cassette. If there is any slack, turn the gear on the cassette in the direction of the arrow to take up the slack.*
- *Make sure the Erase Protection tab is in the position that allows recording. If not, slide the tab. Some cassettes have removable tabs. If the tab has been removed, cover the hole with adhesive tape.*
- *The cassette holder cannot be opened while the camcorder is in the record mode.*


Select Wheel
Power Switch
MENU Button

Display: when a VHS cassette is loaded.


▸NEXT
D. ZOOM ON
TELE MACRO OFF
S-VHS ET OFF
TAPE LENGTH T30
▸RETURN
Menu Screen
When an S-VHS cassette is loaded: S-VHS
S-VHS ET
ON
OFF
EXIT
Setting Menu
TAPE LENGTH T30
▸RETURN
Menu Screen
Normal Screen

Recording Format Setting (GR-SXM46/SXM26/SX41/SX21 only)

Set the recording format according to the format of the tape used or type of recording you wish to perform.

1 Set the Power Switch to "PRO.". Press **MENU**.

2 ***If a VHS cassette is loaded . . .***

.... rotate the Select Wheel to move the highlight bar to "S-VHS ET", then press it. The S-VHS ET Setting Menu appears.

If an S-VHS cassette is loaded . . .

.... rotate the Select Wheel to move the highlight bar to "S-VHS", then press it. The S-VHS Setting Menu appears.

3 Rotate the Select Wheel to set to either of the parameters, then press it. Press the Select Wheel again. The Menu Screen reappears with the highlight bar on "RETURN".

In the S-VHS ET Setting Menu,

ON : Records with S-VHS picture quality on a VHS cassette (factory-preset). This is called Super VHS ET (Expansion Technology).

OFF : Records in VHS.

In the S-VHS Setting Menu,

ON : Records in S-VHS on an S-VHS cassette (factory-preset).

OFF : Records in VHS on an S-VHS cassette.

4 Press the Select Wheel to close the Menu Screen.
- When the S-VHS ET mode is engaged, "S-ET" is displayed.
- During S-VHS record mode, "S" is displayed.
- When S-VHS ET or S-VHS recording starts, "S-VHS REC." is displayed for approx. 3 seconds.

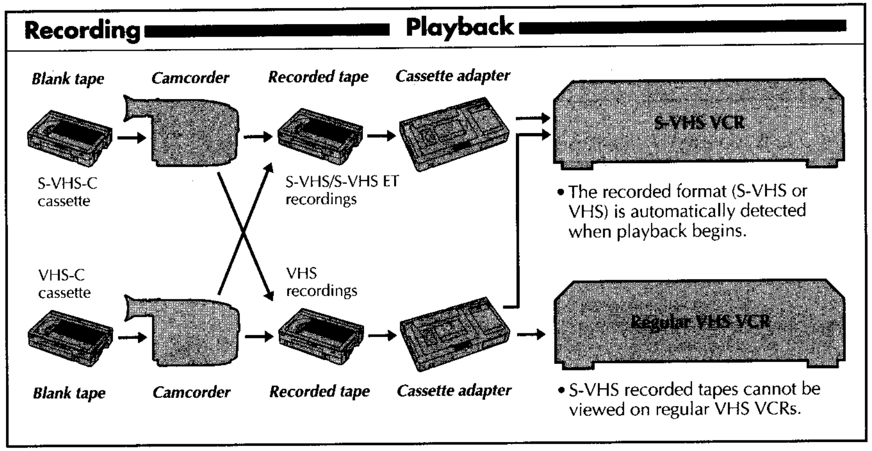
NOTE:

If a cassette is not loaded, "S-VHS" will be displayed in the Menu Screen.

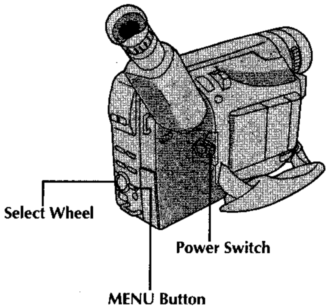
NOTES about S-VHS and S-VHS ET (GR-SXM46/SXM26/SX41/SX21 only)

- *JVC EHG (Extra High Grade) tapes are recommended for superior results.*
  Use S-VHS tape for storing recordings for an extended period or for recording important scenes, as it enables higher-quality recording and playback.
  — It is recommended to specifically label S-VHS ET recordings so you can easily distinguish them from regular VHS recordings.
- *With some tapes, better picture quality may not be obtained even with S-VHS ET recording. It is recommended that you do test record beforehand to make sure whether better results can be obtained.*
- *If the S-VHS ET mode or recording format is switched during recording, the playback picture will be blurred at the switching point.*
- *It is recommended that tapes recorded on this camcorder be played back on this camcorder.*
- *Tapes recorded in S-VHS or S-VHS ET mode can be played back not only on this camcorder but also on a Super VHS VCR.*
  — Tapes recorded in S-VHS ET mode cannot be played back on some VCRs, including some JVC VCRs.
- *Tapes recorded in S-VHS or S-VHS ET mode cannot be played back correctly on a normal VHS VCR.*
- *S-VHS ET does not work with S-VHS tapes.*
- *To avoid on-screen noise, do not perform Still Playback or Shuttle Search repeatedly.*
- *If the picture contains a lot of jitter or noise, use a cleaning cassette.*

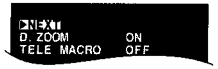
Compatibility Between S-VHS And VHS (GR-SXM46/SXM26/SX41/SX21 only)


Recording
Playback
Blank tape
Camcorder
Recorded tape
Cassette adapter
S-VHS VCR
S-VHS-C cassette
S-VHS/S-VHS ET recordings
VHS-C cassette
VHS recordings
Regular VHS VCR
Blank tape
Camcorder
Recorded tape
Cassette adapter

- The recorded format (S-VHS or VHS) is automatically detected when playback begins.
- S-VHS recorded tapes cannot be viewed on regular VHS VCRs.

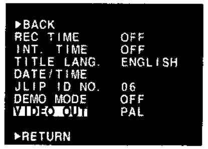


Display



```
▶NEXT
D. ZOOM        ON
TELE MACRO     OFF
```

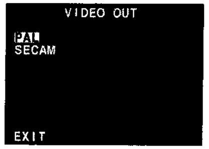
Menu Screen 1



```
▶BACK
REC TIME       OFF
INT. TIME      OFF
TITLE LANG.    ENGLISH
DATE/TIME
JLIP ID NO.    06
DEMO MODE      OFF
VIDEO OUT      PAL

▶RETURN
```

Menu Screen 2



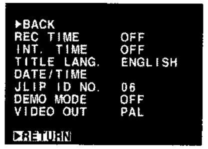
```
      VIDEO OUT
PAL
SECAM





EXIT
```

VIDEO OUT Menu



```
▶BACK
REC TIME       OFF
INT. TIME      OFF
TITLE LANG.    ENGLISH
DATE/TIME
JLIP ID NO.    06
DEMO MODE      OFF
VIDEO OUT      PAL

▶RETURN
```

Video Out Setting (GR-SXM46/SXM26/SX41/SX21 only)

Set to "PAL" or "SECAM" according to the system of the TV or VCR you will be using.

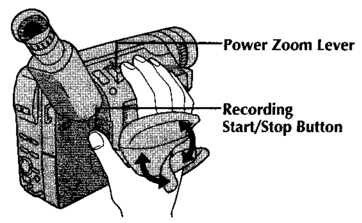
NOTE:

If you change the PAL/SECAM setting during playback, the playback picture colour may be affected. Be sure to choose the correct setting before you start shooting.

1. Set the Power Switch to "PRO.". The power lamp comes on.
2. Press **MENU**. The Menu Screen appears.
3. Rotate the Select Wheel to move the highlight bar to "NEXT" in Menu Screen 1 and press it to display Menu Screen 2. Then, rotate it to move the highlight bar to "VIDEO OUT" and press it. The VIDEO OUT Menu appears.
   - To return to the previous settings, rotate the Select Wheel to move the highlight bar to "EXIT" and press it, then go to step **5**.
4. Rotate the Select Wheel to move the highlight bar to the desired mode, then press it. The desired mode is activated.
5. The Menu Screen reappears with the highlight bar on "RETURN". Press the Select Wheel to close the Menu Screen.

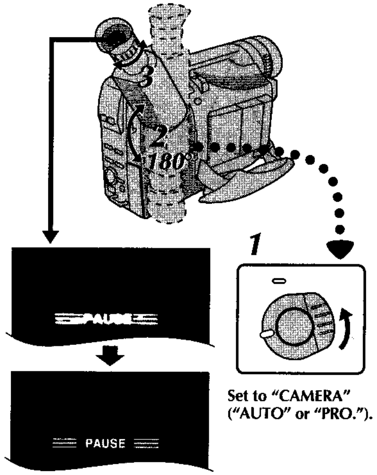
NOTE:

Recordings are made in PAL with this camcorder. If you wish to play back recorded tapes on a VCR or camcorder other than this unit, be sure to use a PAL VCR or camcorder.



Grip Adjustment

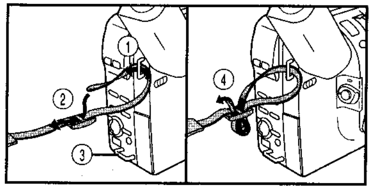
1. Separate the Velcro strip.
2. Pass your right hand through the loop and grasp the grip.
3. Adjust so that your thumb and fingers can easily operate the Recording Start/Stop Button and Power Zoom Lever. Refasten the Velcro strip.



Set to "CAMERA" ("AUTO" or "PRO.").

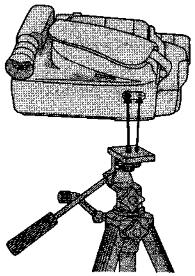
Viewfinder Adjustment

1. Set the Power Switch to "CAMERA" ("AUTO" or "PRO.").
2. Adjust the viewfinder manually for best viewability.
3. Turn the Diopter Adjustment Control until the indications in the viewfinder are clearly focused.



Shoulder Strap Attachment

1. Following the illustration, thread the strap through the eyelet ①, then fold it back and thread it through the buckle ②. Repeat the procedure to attach the other end of the strap to the other eyelet ③, making sure the strap is not twisted.
2. Adjust as shown in the illustration ④.

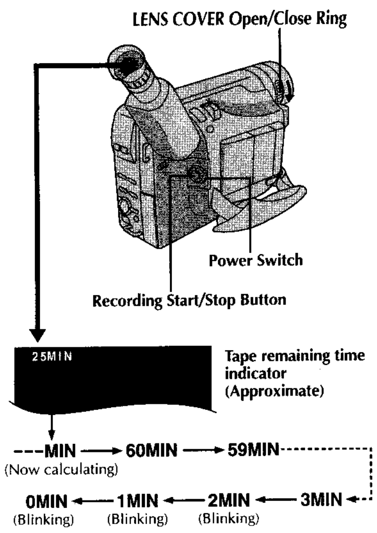


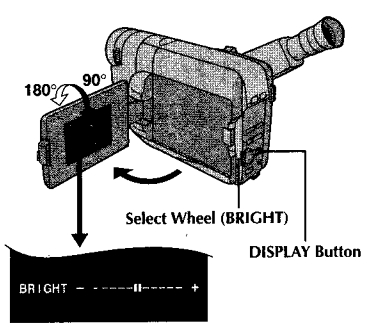
Tripod Mounting

1. Align the screw and camera direction stud on the tripod with the camera's mounting socket and stud hole. Then tighten the screw.

CAUTION:

When using a tripod, be sure to open and extend its legs fully to Stabilize the camcorder. To prevent damage to the unit caused by falling over, do not use a small-sized tripod.


LENS COVER Open/Close Ring
Power Switch
Recording Start/Stop Button
25MIN
Tape remaining time indicator (Approximate)
---MIN → 60MIN → 59MIN
(Now calculating)
0MIN ← 1MIN ← 2MIN ← 3MIN
(Blinking) (Blinking) (Blinking)



To Adjust The Brightness Of The LCD Monitor
.... rotate the Select Wheel (**BRIGHT**) until the bright level indicator on the display moves and the appropriate brightness is reached.

NOTE:
You should already have performed the procedures listed below. If not, do so before continuing.
- *Power (☞ pg. 6)*
- *Load A Cassette (☞ pg. 11)*
- *Tape Length Setting (☞ pg. 10)*
- *Grip Adjustment (☞ pg. 15)*
- *Viewfinder Adjustment (☞ pg. 15)*

Shooting While Watching The Viewfinder

1. Make sure the LCD monitor is closed and locked (GR-SXM46/SXM26/FXM16/FXM161 only). Turn the **LENS COVER** Open/Close Ring to open the lens cover. Set the Power Switch to "CAMERA" ("AUTO" or "PRO."). The power lamp lights and the camcorder enters the Record-Standby mode. "PAUSE" is displayed in the viewfinder.
2. Press the Recording Start/Stop Button. "REC ▶▶▶" appears in the viewfinder while recording is in progress.

To Stop Recording . . .
.... press the Recording Start/Stop Button. The camcorder re-enters the Record-Standby mode.

Shooting While Watching The LCD Monitor (GR-SXM46/SXM26/FXM16/FXM161 only)

1. Make sure the LCD monitor is fully open. Turn the **LENS COVER** Open/Close Ring to open the lens cover. Set the Power Switch to "CAMERA" ("AUTO" or "PRO."). The power lamp lights and the camcorder enters the Record-Standby mode. "PAUSE" is displayed in the LCD monitor.
2. Tilt the LCD monitor upward/downward for best viewability and press the Recording Start/Stop Button. "REC ▶▶▶" appears in the LCD monitor while recording is in progress.

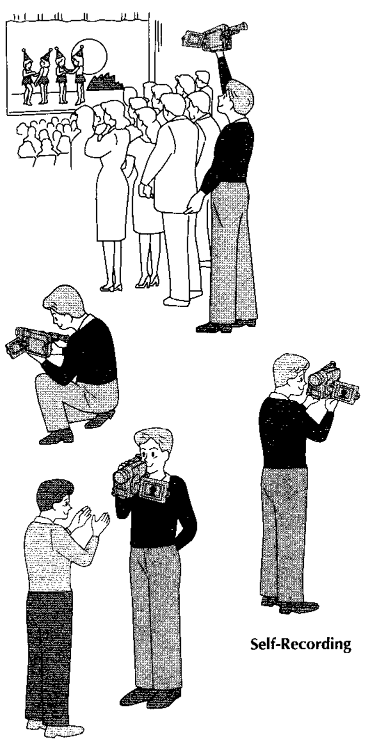
NOTE:
When you use the LCD monitor outdoors in direct sunlight, the LCD monitor may be difficult to see. If this happens, use the viewfinder instead.

To Stop Recording . . .
.... press the Recording Start/Stop Button. The camcorder re-enters the Record-Standby mode.

Power Switch Position

AUTO	:	Suitable for standard recording using NO special effects or manual adjustments.
PRO.	:	Allows you to set recording functions using the menus for more creative capabilities.
OFF	:	Switches off the camcorder.
PLAY	:	Allows you to play back your recordings.

NOTES:
- *When the Power Switch is set to CAMERA and the LCD monitor is opened at an angle of 60 degrees or more, the LCD monitor switches on and the viewfinder switches off automatically to save power (GR-SXM46/SXM26/FXM16/FXM161 only).*
- *The cassette holder cannot be opened unless a power supply is attached.*
- *There may be a delay after you slide **EJECT** until the cassette holder opens. Do not use force.*
- *The time required to calculate the remaining tape length, and the accuracy of the calculation, may vary according to the type of tape used.*
- *The tape remaining time indicator is correct only if the correct tape length has been selected (☞ pg. 10).*
- *"TAPE END" appears when the tape reaches its end, and the power goes off automatically if left in this condition for 5 minutes. "TAPE END" also appears when a cassette whose tape is already at its end is loaded.*
- *If the Record-Standby mode continues for 5 minutes without performing Zoom or any other operations, the camcorder's power shuts off automatically. Set the Power Switch to "OFF", and then back to "CAMERA" to turn the camcorder on again.*
- *If the Recording Start/Stop button is pressed after the Record-Standby mode has continued for over 5 minutes, recording may not start immediately.*
- *If you are recording on a cassette from the middle (such as when a tape is removed and re-inserted during recording), use the Retake function (☞ pg. 19) to find the end of the last recording so you do not erase any of it.*
- *While shooting, sound is not heard from the speaker (GR-SXM46/SXM26/FXM16/FXM161 only).*


Self-Recording

JOURNALISTIC SHOOTING (GR-SXM46/SXM26/FXM16/FXM161 only)

In some situations, different shooting angles may provide more dramatic results. Hold the camcorder in the desired position and tilt the LCD monitor in the most convenient direction. It can rotate 270° (90° downward, 180° upward).

INTERFACE SHOOTING (GR-SXM46/SXM26/FXM16/FXM161 only)

The person you shoot can view himself/herself in the LCD monitor, and you can even shoot yourself while viewing your own image in the LCD monitor.
Open the LCD monitor and tilt it upward to 180 degrees so that it faces forward. When the LCD monitor is tilted upward to an angle of over approx. 105 degrees, the monitor image is inverted vertically, and the viewfinder also switches on.
Point the lens toward the subject (yourself when self-recording) and start recording.
During Interface Shooting, the monitor image and indications do not appear inverted as they would when viewing a mirror.

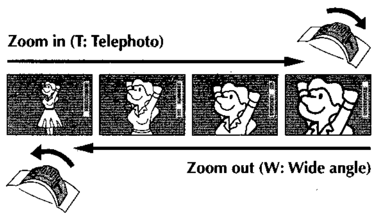
NOTE:
The monitored image can be viewed on the LCD monitor and in the viewfinder.

LCD MONITOR*/VIEWFINDER INDICATIONS

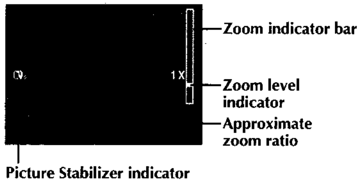
Press **DISPLAY** for more than 1 second to make the following indications appear/disappear from the camcorder's display: cassette warning, tape remaining time, battery pack remaining power indicator and tape length indicator (☞ pg. 52, 53).

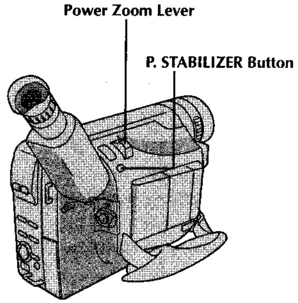
NOTE:
Even if the indications are off, the tape remaining time appears blinking when the tape is near its end, and the battery pack remaining power indicator appears blinking when the power is almost gone.

* GR-SXM46/SXM26/FXM16/FXM161 only.


Zoom in (T: Telephoto)
Zoom out (W: Wide angle)

Display





FEATURE: Zooming

PURPOSE:

To produce the zoom in/out effect, or an instantaneous change in image magnification.
Digital circuitry extends the maximum magnification offered by optical zoom. This system is called Digital Zoom.

OPERATION:

Zoom In
Slide the Power Zoom Lever towards "T".

Zoom Out
Slide the Power Zoom Lever towards "W".

- The further you slide the Power Zoom Lever, the quicker the zoom action.

NOTES:

- *Focusing may become unstable during Zooming. In this case, set the zoom while in Record–Standby, lock the focus by using the manual focus (☞ pg. 31), then zoom in or out in Record mode.*
- *The zoom level indicator (■) moves during zoom. Once the zoom level indicator reaches the top of the zoom indicator bar, all magnification from that point is through digital processing.*
- *When using Digital Zoom, the quality of image may suffer. To deactivate Digital Zoom, set "D.ZOOM" to "OFF" in the Menu Screen (☞ pg. 25).*

FEATURE: Picture Stabilizer

PURPOSE:

To compensate for unstable images caused by camera-shake, particularly at high magnification.

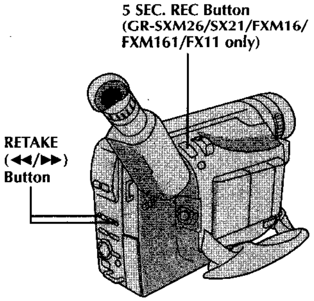
OPERATION:

Press **P. STABILIZER**. "Ⓠ"appears.

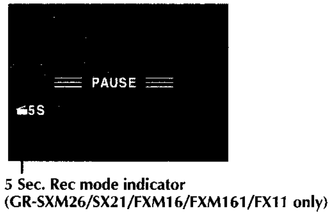
- To switch off the Picture Stabilizer, press **P. STABILIZER**. The indicator disappears.

NOTES:

- *Accurate stabilisation may not be possible if hand shake is excessive, or under the following conditions:*
  - *When shooting subjects with vertical or horizontal stripes.*
  - *When shooting dark or dim subjects.*
  - *When shooting subjects with excessive backlighting.*
  - *When shooting scenes with movement in various directions.*
  - *When shooting scenes with low-contrast backgrounds.*
- *Switch off the Picture Stabilizer when recording with the camcorder on a tripod.*
- *The "Ⓠ" indicator appears blinking if the Stabilizer cannot be used.*



Display


PAUSE
5S
5 Sec. Rec mode indicator (GR-SXM26/SX21/FXM16/FXM161/FX11 only)

FEATURE: Quick Review

PURPOSE:

To check the end of the last recording.

OPERATION:

1) Set the Power Switch to "CAMERA" ("AUTO" or "PRO.").
2) Press ◀◀ and release quickly during the Record–Standby mode.

- Tape is rewound for approx. 1 second and played back automatically, then pauses in Record–Standby mode for the next shot.

NOTE:

Distortion may occur at the start of playback. This is normal.

FEATURE: Retake

PURPOSE:

To re-record certain segments.

OPERATION:

1) Make sure the camcorder is in the Record–Standby mode.
2) Press and hold either **RETAKE** to reach the start point for new recording. Pressing ▶▶ forwards the tape and pressing ◀◀ reverses it.
3) Press the Recording Start/Stop Button to start recording.

NOTE:

Noise bars appear and pictures may become monochrome or darken during Retake. This is normal.

FEATURE: 5Sec. Rec (5-sec. Recording) (GR-SXM26/SX21/FXM16/FXM161/FX11 only)

PURPOSE:

To record a scene for 5 seconds, providing quick scene transitions like those seen in TV programmes.

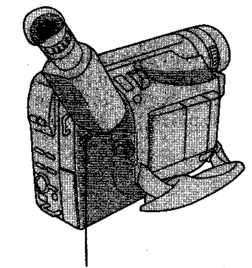
OPERATION:

1) During Record–Standby, press **5SEC. REC.** "📹 5S" appears and 5Sec. Rec is reserved.
2) Press the Recording Start/Stop Button. Recording starts, and after 5-second recording is finished, the camcorder reenters the Record–Standby mode automatically.

- To cancel the 5Sec. Rec. function, press **5SEC. REC** again so that "📹 5S" disappears.

NOTE:

*Fade/Wipe (☞ pg. 22) cannot be activated by pressing **5SEC. REC.***



LIGHT OFF/AUTO/ON Switch

DANGER

- The video light can become extremely hot. Do not touch it either while in operation or soon after turning it off, otherwise serious injury may result.
- Do not place the camcorder into the carrying case immediately after using the video light, since it remains extremely hot for some time.
- When operating, keep a distance of about 30 cm between the video light and people or objects.
- Do not use near flammable or explosive materials.
- It is recommended that you consult your nearest JVC dealer for replacing the video light.

FEATURE: Video Light (GR-SXM46/ SXM26/SX41/FXM161 only)

PURPOSE:

To brighten the scene when natural lighting is too dim.

OPERATION:

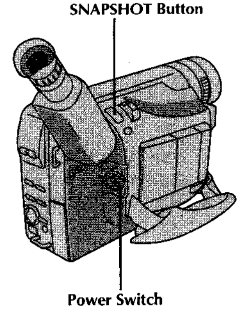
Set **LIGHT OFF/AUTO/ON** as required:

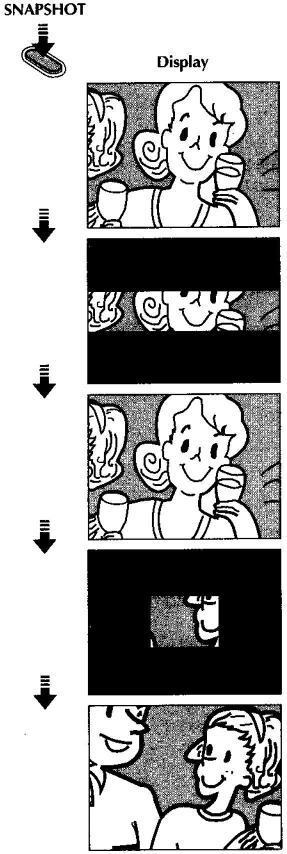
OFF	: Turns off the light.
AUTO	: Automatically turns on the light when the camcorder senses insufficient lighting on the subject.
ON	: Always keeps the light on as long as the camcorder is turned on.

- The video light can only be used with the camcorder's power on.
- It is recommended to set the white balance (☞ pg. 32) to ☀ when you use the video light.
- When not using the video light, turn it off to save battery power.

NOTES:

- *Even if the battery indicator (▭) does not blink if the battery pack's charge is low, the camcorder may turn off automatically when you turn on the video light, or when you start recording with the video light turned on.*
- *When **LIGHT OFF/AUTO/ON** is set to "AUTO":*
  - *Depending on the lighting conditions, the video light may keep turning on and off. In this case, manually switch the light on or off using **LIGHT OFF/AUTO/ON**.*
  - *While the "Sports" or "High Speed Shutter" mode (☞ pg. 23) is engaged, the light is likely to stay on.*
  - *While the "Twilight" mode (☞ pg. 23) is engaged, the light will not activate.*





Snapshot (GR-SXM46/SX41 only)

Use your camcorder like a regular camera and take a snapshot, or several of them in succession.

1 Set the Power Switch to "AUTO" or "PRO.".

2 Press **SNAPSHOT**.

If you press during Record-Standby . . .

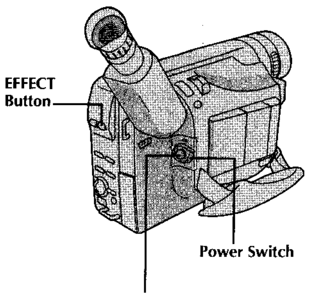
.... a still image will be recorded for approx. 6 seconds, then the camcorder re-enters the Record-Standby mode.

If you press during Recording . . .

.... a still image will be recorded for approx. 6 seconds, then the normal recording resumes.

NOTES:

- *After **SNAPSHOT** is pressed, there is a momentary camera shutter-type blackout together with the sound effect of a shutter closing, which is recorded together with the image.*
- *Snapshot is available during playback as well. However, the shutter sound is not heard.*



Fade/Wipe Effects

These effects let you make pro-style scene transitions. Fade- or wipe-in works at recording start, and fade- or wipe-out works at recording end.

1. Set the Power Switch to "PRO.".
2. Press **EFFECT** repeatedly until the desired mode's name and indication appear.
   They are displayed for approx. 2 seconds, then the name disappears so that only the indication remains. The effect is reserved.
3. Press the Recording Start/Stop Button to activate fade-in/out or wipe-in/out.
4. To cancel a fade or wipe, press **EFFECT** repeatedly until "OFF" appears.
   "OFF" is displayed for approx. 2 seconds and the fade/wipe standby mode is cancelled.

Bk FADER

Fades in/out to a black screen.

MOSAIC (Fader)

Gradually turns/returns the picture into/from a mosaic pattern.

SHUTTER (Wipe)

A black screen moves in from the top and bottom, closing over the image like a shutter, or a new image pushes open the black screen vertically from the centre.

SLIDE (Wipe)

A black screen moves in from the left to gradually cover the image, or a new image moves in from right to left.

DOOR (Wipe)

Wipes in as the two halves of a black screen open to the left and right, revealing the scene, or wipes out and the black screen reappears from left and right to cover the scene.

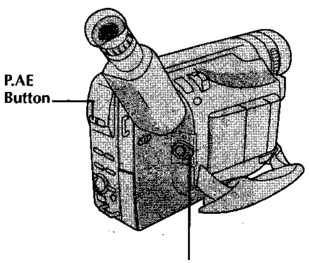
CW:CORNER (Wipe)

Wipes in on a black screen from the upper right to the lower left corner, revealing the scene, or wipes out from lower left to upper right, leaving a black screen.

WW:WINDOW (Wipe)

Wipes in on a black screen from the centre of the screen towards the corners, revealing the scene, or wipe out from the corners to the centre, leaving a black screen.

NOTES:
- *Pressing and holding the Recording Start/Stop Button allows you to vary the length for the image during fade in/out or wipe in/out.*
- *The screen becomes slightly reddish when the Fade/Wipe is used with Sepia (☞ pg. 23).*



Program AE With Special Effects

1. Set the Power Switch to "PRO.".
2. Press **P.AE** repeatedly until the desired mode's name and indication appear.
   They are displayed for approx. 2 seconds, then the name disappears so that only the indication remains. The mode is activated.
3. To cancel the effect, press **P.AE** repeatedly until "OFF" appears. "OFF" is displayed for approx. 2 seconds.

NOTES:
- *Only one mode can be engaged at a time.*
- *The screen becomes slightly reddish when the Fade/Wipe (☞ pg. 22) is used in the Sepia mode.*
- *The screen becomes slightly dark in the High Speed Shutter mode. Use in well-lit situations.*
- *In the "High Speed Shutter" or "Sports" modes, picture colour may be adversely affected if the subject is lit by alternating discharge-type light sources such as flourescent or mercury-vapour lights.*

SEPIA

The scene being shot is recorded in sepia-tinted (reddish-brown) monochrome, giving the effect of an older movie. Use together with Wide (☞ pg. 25) for the authentic look of a classic Hollywood movie.

SPORTS

High shutter speed clearly captures fast-moving action.

ND:ND EFFECT

A black mist darkens the picture, as when an ND filter is used. Helps to counter the effects of glare on the subject.

FG:FOG

Makes the picture look misty white, as when an external fog filter is attached to the lens. Softens the image and gives it a "fantasy" look.

TWILIGHT

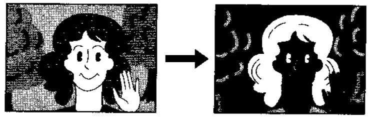
Dusk, twilight scenery, fireworks, etc., look more natural and dramatic. The following happens when Twilight mode is selected:
- Auto gain control is turned off.
- White Balance is set to "☀:FINE" (day mode), but can also be manually changed to another mode (☞ pg. 32).
- Auto Focus becomes available only in the range of 10 m to infinity. To focus when the subject-to-camera distance is less than 10 m, use manual focusing (☞ pg. 31).

2 S1/2000 (1/2000 sec. High Speed Shutter)

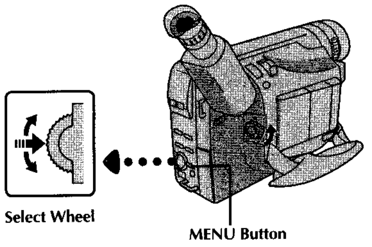
Captures faster action than Sports mode.

NEGA POSI

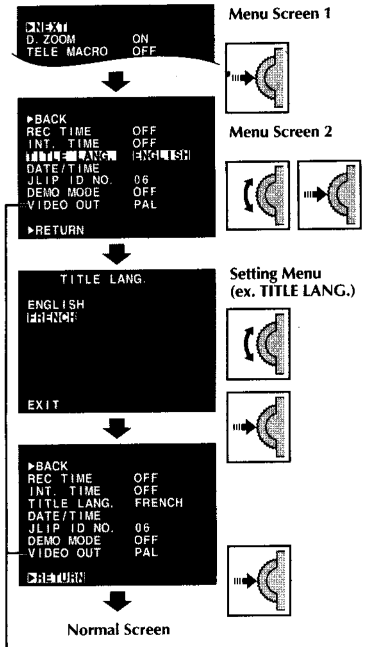
The colours of a picture are reversed.



NEGA POSI mode



Display
(ex. Menu Screen available using the MENU Button)



Menu Screen 1:

▶NEXT
D. ZOOM ON
TELE MACRO OFF

Menu Screen 2:

▶BACK
REC TIME OFF
INT. TIME OFF
TITLE LANG. ENGLISH
DATE/TIME
JLIP ID NO. 06
DEMO MODE OFF
VIDEO OUT PAL
▶RETURN

Setting Menu:

TITLE LANG.
ENGLISH
FRENCH
EXIT

▶BACK
REC TIME OFF
INT. TIME OFF
TITLE LANG. FRENCH
DATE/TIME
JLIP ID NO. 06
DEMO MODE OFF
VIDEO OUT PAL
▶RETURN

GR-SXM46/SXM26/SX41/SX21 only.

Using Menus For Detailed Adjustment

This camcorder is equipped with an easy-to-use, on-screen menu system that simplifies many of the more detailed camcorder settings.

1 Set the Power Switch to "PRO.".

2 Menu access depends on the function you select.

If you select the functions from the "Menu Screen Available Using The Select Wheel" described on pg. 25 . . .
.... press the Select Wheel. The Menu Screen appears.

If you select the functions from the "Menu Screen Available Using The MENU Button" described on pg. 25 and 26 . . .
.... press **MENU**. The Menu Screen appears.

3 Rotate the Select Wheel to place the highlight bar on the desired function.

- To go from Menu Screen 1 to Menu Screen 2, rotate the Select Wheel to "NEXT" and press it. To go back to Menu Screen 1 from Menu Screen 2, rotate the Select Wheel to "BACK", and press it.
- To return to the previous setting, place the highlight bar on "RETURN", then go to step **6**.

4 Press the Select Wheel. The setting procedure depends on the function you select.

If you select "FOCUS", "EXPOSURE", "M.W.B." or "DATE/ TIME"...
.... see respective pages (FOCUS: ☞ pg. 31, EXPOSURE: ☞ pg. 30, M.W.B.: ☞ pg. 32, DATE/TIME: ☞ pg. 9) and perform each procedure from step **4**.

If you select "JLIP ID NO." . . .
.... rotate the Select Wheel until the desired number appears, and press it. Then rotate the Select Wheel to move the highlight bar to "EXIT".

If you select any other functions . . .
.... rotate the Select Wheel to move the highlight bar to the desired setting.

- To return to the previous setting, place the highlight bar on "EXIT".

5 Press the Select Wheel. The Menu Screen reappears with the highlight bar on "RETURN".

6 Press the Select Wheel. The normal screen reappears.

NOTE:
No menu functions except "FOCUS" and "EXPOSURE" are available while in the Record mode.

MENU SCREEN EXPLANATIONS

Menu Screen Available Using The Select Wheel

FOCUS	Refer to "Focusing" (☞ pg. 31).	
EXPOSURE	Refer to "Exposure Control" (☞ pg. 30).	
M.W.B.	Refer to "White Balance Adjustment" and "Manual White Balance Operation" (☞ pg. 32).	
WIDE	▨ **OFF**	Does not display black bars.
	ON	Allows you to record black bars at the top and bottom of the screen to produce a cinema-like "wide-screen" effect. If a snapshot (GR-SXM46/SX41 only, ☞ pg. 21) is taken while the camcorder is in the WIDE mode, the snapshot image is recorded without the black bars at the top and bottom of the screen.
GAIN (GR-SXM46/ SXM26/SX41/ SX21 only)	▨ **NORMAL**	To record a subject in a dimly lit environment, when it is more convenient to shoot with a less coarse picture although the subject becomes slightly dark.
	OFF	Allows you to shoot dark scenes with no picture brightness adjustment.
S.LX (GR-FXM16/ FXM161/FX11 only)	▨ **MAX**	To record a subject in a darkly lit environment, it is more convenient to shoot the subject with a brighter image even if the picture becomes slightly coarse.
	NORMAL	To record a subject in a dimly lit environment, when it is more convenient to shoot with a less coarse picture although the subject becomes slightly dark.
	OFF	Allows you to shoot dark scenes with no picture brightness adjustment.
TITLE	Allows you to superimpose one of eight preset titles (☞ pg. 27).	
DATE/TIME DISP.	Makes the date/time settings appear in the camcorder or on a connected monitor (☞ pg. 27).	

Menu Screen Available Using The MENU Button

This Menu Screen cannot be accessed while recording.

D. ZOOM	▨ **ON**	Allows you to use the Digital Zoom. By digitally processing and magnifying images, zooming is possible from 16X (the optical zoom limit), to a maximum of 160X (GR-SXM46/SX41/FXM161)/ 50X (GR-SXM26/SX21/FXM16/FX11) digital magnification.
	OFF	Digital Zoom is not available. Only optical zoom (maximum 16x magnification) can function. When set to "OFF" during Digital Zoom, zoom magnification changes to 16X.
TELE MACRO	▨ **OFF** **ON**	Usually the distance to a subject where the lens is in focus depends on the zoom magnification. Unless there is a distance of more than 1 m to the subject, the lens is out of focus at the maximum telephoto setting. When set to "ON", you can shoot a subject as large as possible at a distance of approx. 60 cm. • Depending on the zoom position, the lens may go out of focus.

▨ : **Factory-preset**

CONTINUED ON NEXT PAGE

Menu Screen Available Using The MENU Button (cont.)

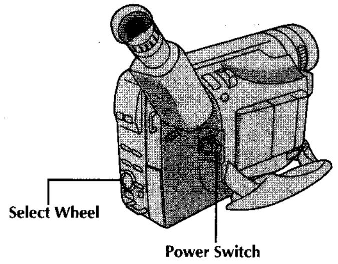
S-VHS* **(S-VHS ET*)** **(GR-SXM46/ SXM26/SX41/ SX21 only)**	▨ ON	Records in S-VHS on a VHS or S-VHS cassette (☞ pg. 12).
	OFF	Records in VHS on a VHS or S-VHS cassette (☞ pg. 12).
TAPE LENGTH	Allows you to set the tape length depending on the tape used (☞ pg. 10).	
REC TIME	Refer to "Animation" (☞ pg. 28) and "Time-Lapse" (☞ pg. 29).	
INT. TIME	Refer to "Time-Lapse" (☞ pg. 29).	
TITLE LANG.	Allows you to select the language (ENGLISH or FRENCH) of Instant Titles (☞ pg. 27).	
DATE/TIME	Allows you to set the current date and time (☞ pg. 9).	
JLIP ID NO.	This number is necessary when connecting the camcorder to a device such as a computer using the J terminal (JLIP). The numbers range from 01 to 99. Factory setting is 06.	
DEMO MODE	▨ ON	Demonstrates certain functions such as Fade/Wipe, etc. When "DEMO MODE" is set to "ON" and the Menu Screen is closed, the demonstration starts. Operating the Power Zoom Lever during the demonstration stops the demonstration temporarily. If the Power Zoom Lever is not moved for more than 1 minute after that, the demonstration will resume. **NOTE:** *When a tape whose Erase Protection tab is in the position that allows recording is loaded in the camcorder, demonstration is not available.*
	OFF	Automatic demonstration will not take place.
VIDEO OUT **(GR-SXM46/ SXM26/SX41/ SX21 only)**	▨ PAL	To play back on a connected PAL TV or dub to a PAL VCR.
	SECAM	To play back on a connected SECAM TV or dub to a SECAM VCR.

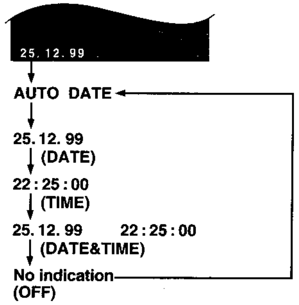
*S-VHS ET is displayed when a VHS cassette is loaded, and S-VHS is displayed when an S-VHS cassette is loaded (☞ pg. 12). If a cassette is not loaded, "S-VHS" will be displayed in the Menu Screen.
S-VHS ET is preset to "OFF".

▨: **Factory-preset**

Date/Time Insert

Allows you to display the date and time in the camcorder or on a connected colour monitor, as well as to record them manually or automatically.
You should have already performed the Date/Time Setting procedure (☞ pg. 9).





1. Set the Power Switch to "PRO.".
2. Press the Select Wheel to display the Menu Screen.
3. Rotate the Select Wheel to move the highlight bar to "DATE/TIME DISP." then press it to display the Date/Time DISP. Menu.
4. Rotate the Select Wheel to move the highlight bar to the desired mode, then press it. The desired mode is activated.
5. The Menu Screen reappears with the highlight bar on "RETURN". Press the Select Wheel to close the Menu Screen.

NOTES:

DISPLAY

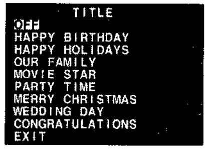
- *The selected display can be recorded.*
- *If you do not want to record the display, select the OFF mode before shooting.*

AUTO DATE

- *Your camcorder automatically records the date for about 5 seconds after recording is initiated in the following situations:*
  - *After changing the date.*
  - *After loading a cassette.*
  - *After Auto Date Record mode is selected by rotating the Select Wheel.*
- *In this mode, the date is replaced after 5 seconds with "AUTO DATE" but this is not recorded.*

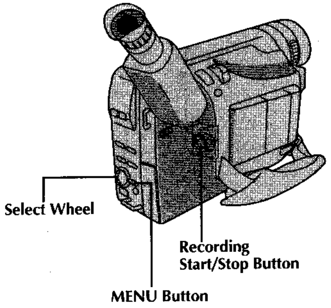
Instant Titles

The camcorder has eight preset titles in memory. You can superimpose one of them over the video image.
Instant Titles can be displayed not only in English but also in French. Change the setting in TITLE LANG. in the Menu Screen. (☞ pg. 24, 26).

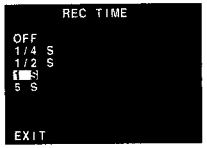


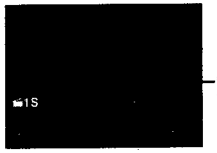
1. Set the Power Switch to "PRO.".
2. Press the Select Wheel to display the Menu Screen.
3. Rotate the Select Wheel to move the highlight bar to "TITLE" then press it to display the TITLE Menu.
4. Rotate the Select Wheel to move the highlight bar to the desired mode, then press it. The desired mode is activated.
   - To make the title indication disappear, select "OFF".
5. The Menu Screen reappears with the highlight bar on "RETURN". Press the Select Wheel to close the Menu Screen.

NOTE:
The selected title will remain until OFF is selected in the TITLE Menu.


Select Wheel
Recording Start/Stop Button
MENU Button

Display


REC TIME
OFF
1/4 S
1/2 S
1 S
5 S
EXIT
REC TIME Menu


1S
Recording time indicator

REC TIME indication on the normal screen

Animation

You can give stationary scenes or objects an illusion of movement. This function allows you to shoot a series of pictures, each slightly different, of the same object for a brief period of time.

NOTES:

Before performing the following steps, make sure that:

- *The Power Switch is set to "PRO.".*
- *The camcorder is in the Record-Standby mode.*

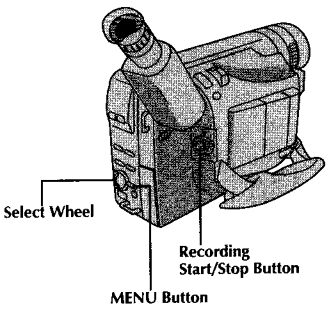
1 Press **MENU**. The Menu Screen appears.

2 Rotate the Select Wheel to move the highlight bar to "NEXT" in Menu Screen 1 and press it to display Menu Screen 2. Then, move the highlight bar to "REC TIME" and press it. The REC TIME Menu appears. Rotate the Select Wheel to move the highlight bar to the desired recording time, then press it. The Menu Screen reappears with the highlight bar on "RETURN". Press the Select Wheel again to close the Menu Screen.

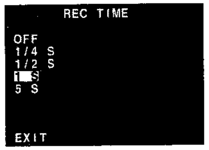
3 Press the Recording Start/Stop Button after focusing on the subject. The recording stops automatically after the selected period of time.

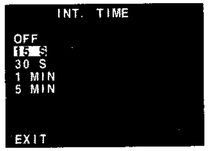
4 Repeat step **3** for the desired number of pictures.

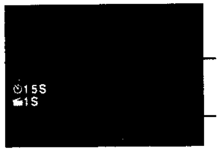
5 To release the Animation mode, set "REC TIME" in the Menu screen to "OFF".


Select Wheel
Recording Start/Stop Button
MENU Button

Display


REC TIME
OFF
1/4 S
1/2 S
1 S
5 S
EXIT
REC TIME Menu


INT. TIME
OFF
15 S
30 S
1 MIN
5 MIN
EXIT
INT. TIME Menu


15S
1S
Interval time indicator
Recording time indicator

INT. TIME and REC TIME indications on the normal screen

Time-Lapse

You can record sequentially at preset time spans. Leaving the camcorder aimed at a specific subject, you can record subtle changes over an extended period of time.

NOTES:

Before performing the following steps, make sure that:

- *The Power Switch is set to "PRO.".*
- *The camcorder is in the Record-Standby mode.*

1 Press **MENU**. The Menu Screen appears.

2 Rotate the Select Wheel to move the highlight bar to "NEXT" in Menu Screen 1 and press it. Menu Screen 2 appears with the highlight bar on "REC TIME" and press it. The REC TIME Menu appears. Rotate the Select Wheel to move the highlight bar to the desired recording time, then press it. The Menu Screen reappears.

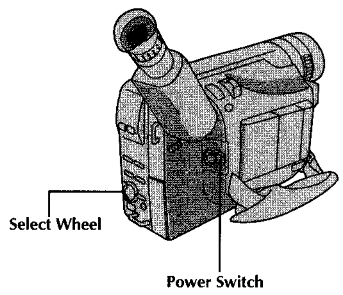
3 Rotate the Select Wheel to move the highlight bar to "INT. TIME", then press it. The INT. TIME Menu appears. Rotate the Select Wheel to move the highlight bar to the desired interval time, then press it. The Menu Screen reappears with the highlight bar on "RETURN". Press the Select Wheel again to close the Menu Screen.

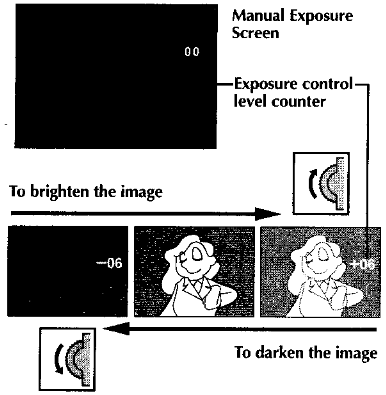
4 Press the Recording Start/Stop Button. Recording and intervals alternate automatically.

5 To release the Time-Lapse mode, when "REC ▶▶▶" is not displayed, press the Recording Start/Stop Button to display "≡**PAUSE**≡", then set "REC TIME" and "INT. TIME" in the Menu Screen to "OFF".

NOTES (for Animation and Time-Lapse):

- *For best results, make sure the camcorder is secured when shooting in Animation or Time-Lapse mode.*
- *Fade- or wipe-in/out cannot be performed during Animation or Time-Lapse shooting.*
- *Before performing other operations following Animation or Time-Lapse recording, make sure the Animation or Time-Lapse mode is deactivated.*
- *Animation and Time-Lapse are cancelled when the power is shut off or when the cassette is ejected.*





Exposure Control

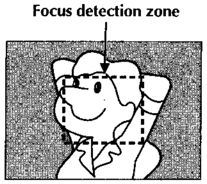
This feature automatically adjusts the iris for the best available picture quality, but you can override it and make the adjustment manually. Manual exposure adjustment is recommended in the following situations:

- *When shooting using reverse lighting or when the background is too bright.*
- *When shooting on a reflective natural background such as at the beach or when skiing.*
- *When the background is overly dark or the subject light.*

1. Set the Power Switch to "PRO.".
2. Press the Select Wheel to display the Menu Screen.
3. Rotate the Select Wheel to move the highlight bar to "EXPOSURE" and press it. The EXPOSURE Menu appears.
4. Rotate the Select Wheel to move the highlight bar to "MANU", then press it. The Menu Screen disappears and "00" (exposure control level counter) appears.
5. To brighten the image, rotate the Select Wheel upward. The exposure control level counter increases (maximum +06).
   To darken the image, rotate the Select Wheel downward. The exposure control level counter decreases (maximum –06).
6. Press the Select Wheel. The setting is complete. The Menu Screen reappears with the highlight bar on "RETURN".
7. Press the Select Wheel. The Menu Screen disappears and the exposure control level counter reappears to indicate the exposure is adjusted.

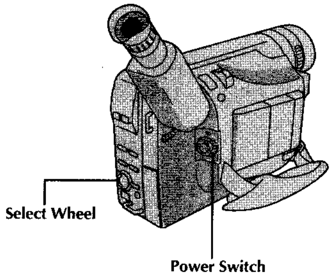
NOTES:

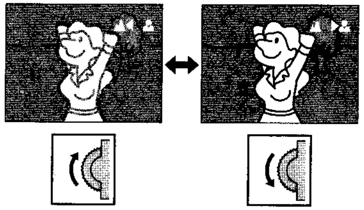
- *To return to the factory setting, select "AUTO" in step **4**.*
- *To re-adjust exposure, repeat the procedure from step **2**.*



NOTES:

- *If the lens is smeared or blurred, accurate focusing is not possible. Keep the lens clean, wiping with a piece of soft cloth if it gets dirty. When condensation occurs, wipe with a soft cloth or wait for it to dry naturally.*
- *When shooting a subject close to the lens, zoom out first (☞ pg. 18). If zoomed in in the auto focus mode, the camcorder could automatically zoom out depending on the distance between the camcorder and the subject. This does not occur with "TELE MACRO" (☞ pg. 25).*





Focusing

AUTO FOCUS

The camcorder's Full Range AF system offers continuous shooting ability from close-up to infinity. However, correct focus may not be obtainable in the situations listed below (in these cases use manual focusing):

- When two subjects overlap in the same scene.
- When illumination is low.*
- When the subject has no contrast (difference in brightness and darkness), such as a flat, one-colour wall, or a clear, blue sky.*
- When a dark object is barely visible in the viewfinder.*
- When the scene contains minute patterns or identical patterns that are regularly repeated.
- When the scene is affected by sunbeams or light reflecting off the surface of a body of water.
- When shooting a scene with a high-contrast background.

* The low-contrast warning "▲▲" appears

MANUAL FOCUS

Make the necessary viewfinder adjustments to use the viewfinder (☞ pg. 15).

1. Set the Power Switch to "PRO.".
2. Press the Select Wheel to display the Menu Screen.
3. Rotate the Select Wheel to move the highlight bar to "FOCUS" and press it. The FOCUS Menu appears.
4. Rotate the Select Wheel to move the highlight bar to "MANU", then press it. The Menu Screen disappears and "▲" and "▲" appear. The focus is locked at this point.
5. To focus on a farther subject, rotate the Select Wheel upward. "◀" appears and blinks.
   To focus on a nearer subject, rotate the Select Wheel downward. "▶" appears and blinks.
6. Press the Select Wheel. The setting is complete. The Menu Screen reappears with the highlight bar on "RETURN".
7. Press the Select Wheel. The Menu Screen disppears and "▲▲" reappears to indicate the focus is locked.

NOTES:

- *To return to Auto Focus, select "AUTO" in step **4**.*
- *To re-adjust Manual Focus, repeat the procedure from step **2**.*
- *Be sure to focus the lens in the maximum telephoto position when you use the Manual Focus mode. If you focus in on a certain subject in the wide-angle position, sharply focused images cannot be obtained when zoomed in because the depth-of-field is reduced at longer focal lengths.*
- *When the focus level cannot be adjusted any farther or closer, "▲" or "▲" will blink.*

White Balance Adjustment

A term that refers to the correctness of colour reproduction under various lighting. If the white balance is correct, all other colors will be accurately reproduced.
The white balance is usually adjusted automatically. However, more advanced camcorder operators control this function manually to achieve a more professional colour/tint reproduction.

1. Set the Power Switch to "PRO.".
2. Press **MENU**. The Menu Screen appears.
3. Rotate the Select Wheel to move the highlight bar to "M.W.B.", then press it. The Menu Screen disappears and the M.W.B. Menu appears.
4. Rotate the Select Wheel to move the highlight bar to the desired setting.
   "AUTO"
   White balance is adjusted automatically (factory preset).
   "☀ : **FINE**"
   Outdoors on a sunny day.
   "☁ : **CLOUD**"
   Outdoors on a cloudy day.
   "✹ : **HALOGEN**"
   A video light or similar type of lighting is used.
   "MWB"
   White balance is set manually.
5. Press the Select Wheel. The Menu Screen reappears with the highlight bar on "RETURN". Press the Select Wheel again to close the Menu Screen.

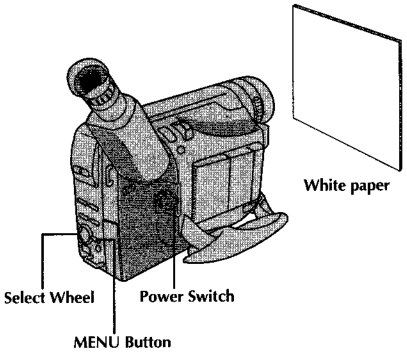
To Return To Automatic White Balance . . .
.... select "AUTO" in step **4**. Or set the Power Switch to "AUTO".

NOTE:
White balance cannot be used when Sepia (☞ pg. 23) is activated.

Manual White Balance Operation

Perform Manual White Balance when shooting under various types of lighting.

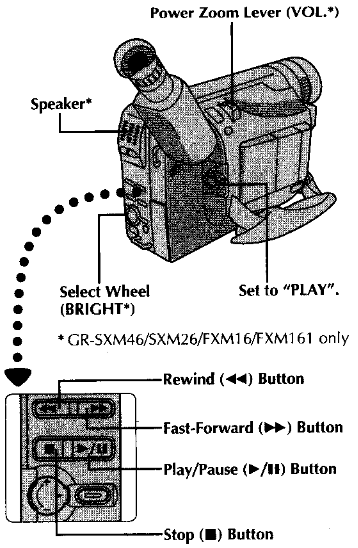
1. Follow steps **1** through **4** of the white balance adjustment, and select "MWB".
2. Hold a sheet of plain white paper in front of the subject. Adjust zoom or position yourself so that the white paper fills the screen.
3. Press the Select Wheel until "MWB" begins blinking.
   When the setting is completed, "MWB" stops blinking, and the Menu Screen reappears with the highlight bar on "RETURN".
4. Press the Select Wheel again to close the Menu Screen.



To Change The Tint For Recording . . .
.... in step **2**, substitute coloured paper for white. The white balance is adjusted based on the colour, changing the tint. Red paper = deeper green; blue paper = orange; yellow paper = deeper purple.

NOTES:
- *In step 2, it may be difficult to focus on the white paper. In such a case, adjust focus manually (☞ pg. 31).*
- *A subject can be shot under various types of lighting conditions indoors (natural, flourescent, candlelight, etc.). Because the colour temperature is different depending on the light source, the subject tint will differ depending on the white balance settings. Use this function for a more natural result.*
- *Once you adjust white balance manually, the setting is retained even if the power is turned off or the battery removed.*

PLAYBACK Basic Playback



* GR-SXM46/SXM26/FXM16/FXM161 only

1. Load a tape (☞ pg. 11).
2. Set the Power Switch to "PLAY". To start playback, press **▶/❚❚**.
   • To stop playback, press **■**.
   • Press **◀◀** to rewind, or **▶▶** to fast-forward the tape during Stop mode.

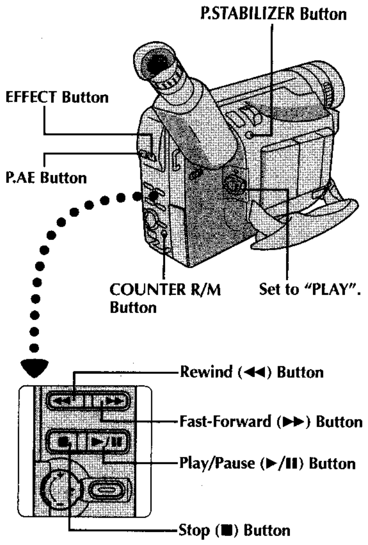
NOTES:
- *The camcorder shuts off automatically after about 5 minutes in Stop mode. To turn on again, set the Power Switch to "OFF", then to "PLAY".*
- *When the Power Switch is set to "PLAY" and the LCD monitor is opened at an angle of 60 degrees or more, the LCD monitor switches on and the viewfinder switches off automatically to save power (GR-SXM46/SXM26/FXM16/FXM161 only).*
- *The playback picture can be viewed in the viewfinder (with the LCD monitor* shut), on the LCD monitor* or on a connected TV (☞ pg. 36, 37).*
  **GR-SXM46/SXM26/FXM16/FXM161 only.*
- *You can also view the playback picture on the LCD monitor with it flipped over and retracted (GR-SXM46/SXM26/FXM16/FXM161 only).*
- *If a blank portion on the tape is played back, the screen may become black. This is not a malfunction.*

LCD Monitor Brightness Adjustment (GR-SXM46/SXM26/FXM16/FXM161 only): Rotate the Select Wheel (**BRIGHT**) towards "+" to brighten, or towards "–" to darken.
- *The Bright Level Indicator is displayed under the Date/Time Display when you play back images recorded in Wide Mode (☞ pg. 25).*

Speaker Volume Control (GR-SXM46/SXM26/FXM16/FXM161 only): Slide the Power Zoom Lever (**VOL.**) towards "+" to turn up the volume, or towards "–" to turn down the volume.
- *The Speaker Volume Indicator is displayed under the Date/Time Display when you play back images recorded in Wide Mode (☞ pg. 25).*

Still Playback: Pauses during playback.
1) Press **▶/❚❚** during playback.
2) To resume normal playback, press **▶/❚❚** again.
- *Noise bars will appear and the picture will become monochrome during Still Playback.*
- *If TBC (☞ pg. 34) is engaged, noise bars will not appear. This mode is called Fine Still (GR-SXM46/SX41 only).*

Shuttle Search: Allows high-speed search in either direction.
1) Press **▶▶** for forward or **◀◀** for reverse search during playback.
2) To resume normal playback, press **▶/❚❚**.
- *During playback, press and hold **◀◀** or **▶▶**. The search continues as long as you hold the button. Once you release it, normal playback resumes.*
- *Noise bars appear and pictures may become monochrome or darken during Shuttle Search. This is normal.*



(GR-SXM46/SX41 only)

CLASSIC FILM

Gives recorded scenes a strobe effect.

B/W MONOTONE

Like classic black and white films, your footage is shot in B/W. Used together with the WIDE mode (☞ pg. 25), it enhances the "classic film" effect.

SEPIA

Recorded scenes have a brownish tint like old photos. Combine this with the WIDE mode for a classic look.

STROBE

Your recording looks like a series of consecutive snapshots.

VIDEO ECHO

Adds a "ghost" to the subject, giving your recording a "fantasy" feeling.

Tracking: Eliminates noise bars that appear on-screen during playback. Factory-preset is Auto Tracking.
To activate Manual Tracking:

1) Press **P.AE** and **EFFECT** simultaneously. "MT" appears.
2) Press **P.AE** or **EFFECT** as many times as necessary until the noise bars disappear.

- *To return to Auto Tracking, press **P.AE** and **EFFECT** simultaneously. "AT" blinks. When Auto Tracking finishes, the indication disappears.*
- *When noise bars appear during playback, the camcorder enters the Auto Tracking mode and "AT" is displayed.*
- *Manual Tracking may not work with tapes recorded on other VCRs or camcorders.*

TBC (Time Base Corrector): Removes jitter from fluctuating video signals to deliver a stable picture even with old tapes. Factory-preset: TBC is engaged.
To activate/release the TBC mode, press **P.STABILIZER** during playback for more than 1 second. When the TBC mode is activated, "TBC" is displayed.

- *The "TBC" indicator turns green (grey with a camcorder equipped with a black/white viewfinder) while TBC is working.*
- *TBC does not work during still playback and shuttle search.*
- *The "TBC" indicator turns white while TBC is not operative.*
- *It may take a few seconds before TBC actually starts working.*
- *The picture may be distorted if the TBC mode is activated or deactivated at the edit-in/-out points or when normal playback resumes after still playback or shuttle search.*
- *If the playback picture is distorted when TBC is set to on, turn off TBC.*

Counter Memory Function: Makes it easier to locate a specific tape segment.

1) Press **COUNTER R/M** and hold for more than 1 second. The counter resets to "0:00:00".
2) Press **COUNTER R/M** for less than 1 second. "M" appears.
3) After recording or playback, press ■, then ◄◄. The tape automatically stops at or close to 0:00:00.
4) Press ►/❚❚ to start playback.

- *The counter memory functions in the Fast-Forward and Rewind modes.*
- *To disable the Counter Memory Function, press **COUNTER R/M** for less than 1 second so that "M" disappears.*

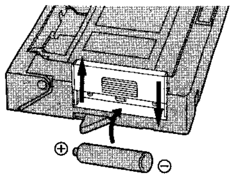
Playback Special Effects (GR-SXM46/SX41 only): Allows you to add creative effects to the playback image.

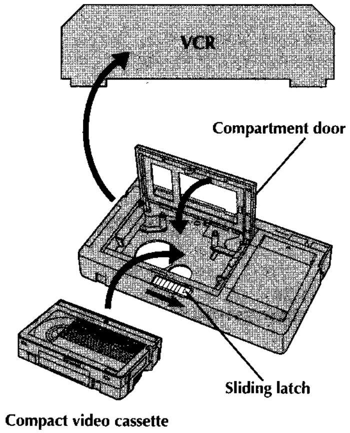
1) Activate the TBC mode and Auto Tracking.
2) Press and hold **P.AE** for 1 second repeatedly until the desired mode's name and indication appear. They are displayed for approx. 2 seconds, then the name disappears so that only the indication remains. The effect is reserved.
3) To cancel the effect, press **P.AE** repeatedly until "OFF" appears. "OFF" is displayed for approx. 2 seconds.

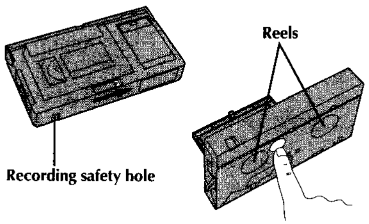
- *Playback Special Effects do not work during shuttle search.*
- *The selected effect mode cannot be changed during still playback.*

Cassette Adapter (optional)

Use this to play back an S-VHS-C/VHS-C video cassette recorded with this camcorder on a VHS VCR. It is fully compatible with any S-VHS/VHS video cassette recorder. The C-P7U (optional) adapter is battery powered and automatically performs tape loading and unloading.







1 Slide the battery cover up to remove it, install one "R6 (AA)" size battery as shown, then reattach the cover.

2 Slide the latch to open the adapter compartment door, then insert the cassette and close the compartment door.

3 Load the cassette adapter into the VCR and play the tape back as you would any other.

4 Slide the latch and the compartment door opens automatically. This may take around 10 seconds. Do not attempt to force the adapter open. Then, insert your finger in the hole on the underside of the adapter as shown in the illustration at left, and push up and remove the cassette.

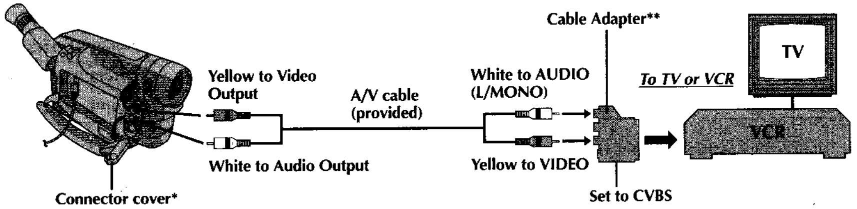
NOTES:

- *During tape loading and unloading, do not touch the reels for safety and tape protection.*
- *Tapes recorded in S-VHS or S-VHS ET mode cannot be played back on a regular VHS VCR. Playback is possible with a VCR equipped with the S-VHS function (GR-SXM46/SXM26/SX41/SX21 only).*
- *During special-effect playback (slow motion, still frame, etc.), the picture may vibrate or noise bars may appear on the screen.*
- *To record on a VCR using a compact cassette and the adapter, cover the adapter's recording safety hole with adhesive tape.*

These are some basic types of connections. When making the connections, refer also to your VCR and TV instruction manuals.

A. Connection to a TV or VCR equipped with a SCART connector compatible only with regular video signal

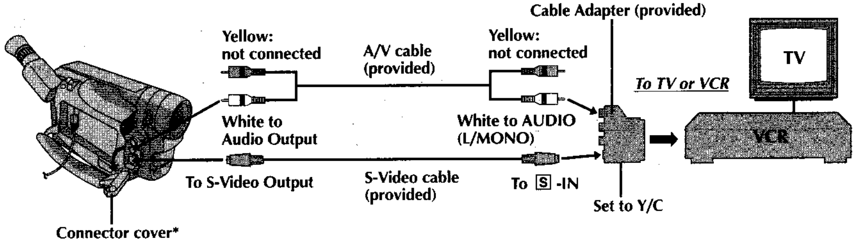
Use the provided Audio/Video (A/V) cable.


Cable Adapter**
Yellow to Video Output
A/V cable (provided)
White to AUDIO (L/MONO)
To TV or VCR
TV
VCR
White to Audio Output
Yellow to VIDEO
Connector cover*
Set to CVBS

* When connecting the cables, open this cover.
** Commercially available (provided with GR-SXM46/SXM26/SX41/SX21 only).

B. Connection to a TV or VCR equipped with a SCART connector compatible with Y/C signal (GR-SXM46/SXM26/SX41/SX21 only)

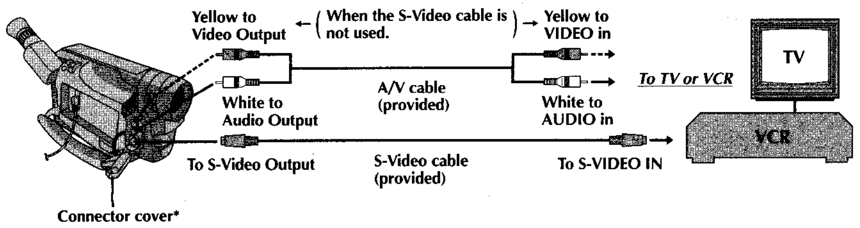
Use the provided Audio/Video (A/V) cable and S-Video cable.


Cable Adapter (provided)
Yellow: not connected
A/V cable (provided)
Yellow: not connected
To TV or VCR
TV
VCR
White to Audio Output
White to AUDIO (L/MONO)
To S-Video Output
S-Video cable (provided)
To S -IN
Set to Y/C
Connector cover*

*When connecting the cables, open this cover.

C. Connection to a TV or VCR equipped with an S-VIDEO IN and/or A/V input (RCA type) connectors (GR-SXM46/SXM26/SX41/SX21 only)

Use the provided Audio/Video (A/V) cable and S-Video cable.


Yellow to Video Output
(When the S-Video cable is not used.)
Yellow to VIDEO in
A/V cable (provided)
To TV or VCR
TV
VCR
White to Audio Output
White to AUDIO in
To S-Video Output
S-Video cable (provided)
To S-VIDEO IN
Connector cover*

*When connecting the cables, open this cover.

Basic Connections

1 Make sure all units are turned off.

2 Connect the camcorder to a TV or VCR as shown in the illustration (☞ pg. 36).
*If using a VCR . . . go to step **3**.*
*If not . . . go to step **4**.*

3 Connect the VCR output to the TV input, referring to your VCR's instruction manual.

4 Turn on the camcorder, the VCR and the TV.
- Set "VIDEO OUT" of the camcorder according to the system of the TV or VCR you will be using. (☞ pg. 14)

5 Set the VCR to its AUX input mode, and set the TV to its VIDEO mode.

NOTES:

- ***It is recommended to use the AC Power Adapter/Charger as the power supply instead of the battery pack (☞ pg. 7).***
- *If your VCR has an S-Video input connector, connect the camcorder and the VCR using the provided S-Video cable. This can improve the dubbed picture quality (GR-SXM46/SXM26/SX41/SX21 only).*
- *To monitor the picture and sound from the camcorder without inserting a tape, set the camcorder's Power Switch to "CAMERA" ("AUTO" or "PRO."), then set your TV to the appropriate input mode.*
- *Make sure you adjust the TV sound volume to its minimum level to avoid a sudden burst of sound when the camcorder is turned on.*
- *If you have a TV or speakers that are not specially shielded, do not place the speakers adjacent to the TV as interference will occur in the camcorder playback picture.*
- *Set the video out select switch of the cable adapter* as required:*
  Y/C : When connecting to a TV or VCR which accepts Y/C signals and uses an S-Video cable (GR-SXM46/SXM26/SX41/SX21 only).
  CVBS: When connecting to a TV or VCR which does not accept Y/C signals and uses an audio/video cable.
  ** Provided with GR-SXM46/SXM26/SX41/SX21 only. Also commercially available.*
- *To view the playback picture on a connected SECAM TV or dub a tape to a SECAM VCR, set "VIDEO OUT" to "SECAM" (GR-SXM46/SXM26/SX41/SX21 only, ☞ pg. 26).*

Tape Dubbing

1 Following the illustration on pg. 36, connect the camcorder and the VCR.
- Set "VIDEO OUT" of the camcorder according to the system of the VCR you will be using. (☞ pg. 14)

2 Set the camcorder's Power Switch to "PLAY", turn on the VCR's power, and insert the appropriate cassettes in the camcorder and the VCR.

3 Engage the VCR's AUX and Record-Pause modes.

4 Engage the camcorder's Play mode to find a spot just before the edit-in point. Once it is reached, press ►/❚❚ on the camcorder.

5 Press ►/❚❚ on the camcorder and engage the VCR's Record mode.

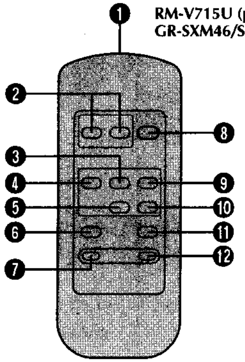
6 Engage the VCR's Record-Pause mode and press ►/❚❚ on the camcorder.

7 Repeat steps **4** through **6** for additional editing, then stop the VCR and camcorder when finished.

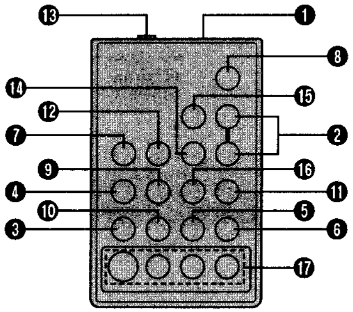
USING THE REMOTE CONTROL UNIT

The Full-Function Remote Control Unit can operate this camcorder from a distance as well as the basic operations (Playback, Stop, Pause, Fast-Forward and Rewind) of your VCR.

RM-V715U (provided with GR-SXM46/SX41 only)



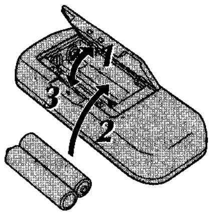
RM-V700U (optional)



Buttons	Functions	
	With the camcorder's Power Switch set to "CAMERA" ("AUTO" or "PRO.").	With the camcorder's Power Switch set to "PLAY".
❶ Infrared beam transmitting window	Transmits the beam signal.	
❷ ZOOM (T/W) Buttons	Zoom in/out (☞ pg. 18)	Zoom in/out (☞ pg. 41)
❸ PLAY Button	—	Playback start (☞ pg. 33)
❹ REW Button	Retake (rewind), Quick Review (☞ pg. 19)	Rewind, Reverse Shuttle Search (☞ pg. 33)
❺ STOP Button	—	Stop (☞ pg. 33)
❻ INSERT Button	—	Insert Editing (☞ pg. 42)
❼ REC TIME Button ANIM. Button	Animation, Time-Lapse (☞ pg. 40)	—
❽ START/STOP Button	Functions the same as the Recording Start/Stop Button on the camcorder.	
❾ FF Button	Retake (forward) (☞ pg. 19)	Fast-Forward, Forward Shuttle Search (☞ pg. 33)
❿ PAUSE Button	—	Pause (☞ pg. 33)
⓫ A.DUB Button	—	Audio dubbing (☞ pg. 43)
⓬ INT. TIME Button SELF TIMER Button*	Time-Lapse (☞ pg. 40)	—
⓭ PAUSE IN Connector	—	☞ pg. 45
⓮ MBR SET Button	—	☞ pg. 44
⓯ VISS Button	Ineffective	
⓰ VCR CTL Button	—	☞ pg. 44
⓱ R.A.EDIT Buttons	—	☞ pg. 46

*This function is unavailable with this camcorder.

⓭ – ⓱: RM-V700U only



Installing The Batteries (RM-V715U, provided with GR-SXM46/SX41 only)

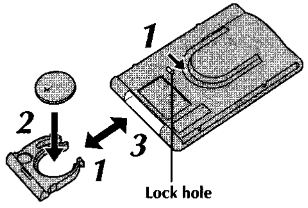
The remote control uses two "R03 (AAA)" size batteries. See "General Battery Precautions" (☞ pg. 54).

1 Open the battery compartment cover as illustrated.

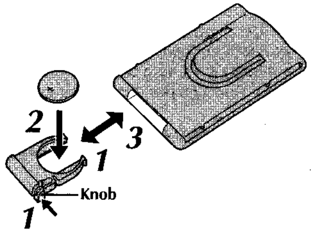
2 Insert two "R03 (AAA)" size batteries in the correct direction.

3 Replace the battery compartment cover.

Ⓐ



Ⓑ



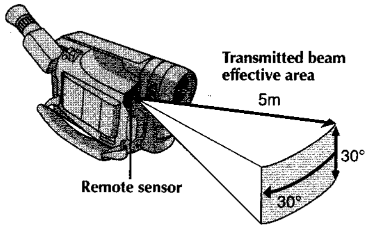
Installing The Battery (RM-V700U, optional)

The remote control uses one lithium battery (CR2025).

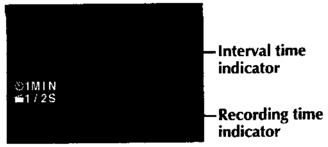
1 Ⓐ : Pull out the battery holder while sliding the lock hole.
Ⓑ : Pinch the release tab and pull out the battery holder.

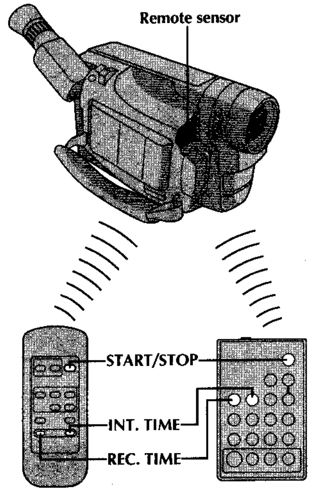
2 Insert the battery in the holder, and be sure to have the "+" mark visible.

3 Slide the holder back in until you hear a click.
- Read the caution concerning lithium batteries (☞ pg. 2).



When using the remote control, be sure to point it at the remote sensor. The illustration shows the approximate transmitted beam effective area for indoor use.
The transmitted beam may not be effective or may cause incorrect operation outdoors or when the remote sensor is directly exposed to sunlight or powerful lighting.





RM-V715U (provided with GR-SXM46/SX41 only) OR **RM-V700U (optional)**

FEATURE: Animation and Time-Lapse

PURPOSE:

The remote control lets you set/release Interval Time and Recording Time without using the Menu Screen.

OPERATION:

Animation

1) Set

Instead of performing steps **1** and **2** on pg. 28 ("Animation"), press **REC TIME** on the remote control. Each time **REC TIME** is pressed, the Recording Time indicator appears, changing in the following order: 1/4S, 1/2S, 1S, 5S and no indication (off).

2) Release

Instead of using the Menu in step **5** on pg. 28, press **REC TIME** on the remote control until the Recording Time indicator disappears.

Time-Lapse

1) Set

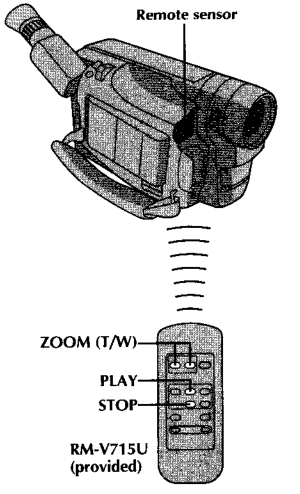
Instead of performing steps **1** through **3** on pg. 29 ("Time-Lapse"), press **REC TIME** and **INT. TIME** on the remote control. Each time **REC TIME** is pressed, the Recording Time indicator appears, changing in the following order: 1/4S, 1/2S, 1S, 5S and no indication (off). Each time **INT. TIME** is pressed, the Interval Time indicator appears, changing in the following order: 15S, 30S, 1MIN, 5MIN and no indication (off).

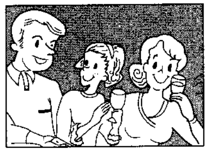
2) Release

Instead of using the Menu in step **5** on pg. 29, press **REC TIME** and **INT. TIME** on the remote control until the indicators disappear.

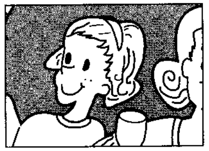
NOTE:

Also refer to pgs. 28 and 29.





Normal playback



Press T

Playback Zoom (GR-SXM46/SX41 only)

To magnify the recorded image up to 10X at any time during playback.

NOTES:

- *Use the RM-V715U remote control unit to perform this procedure.*
- *Make sure that the TBC mode is activated (☞ pg. 34).*

1 Press **PLAY** to find the scene of interest.

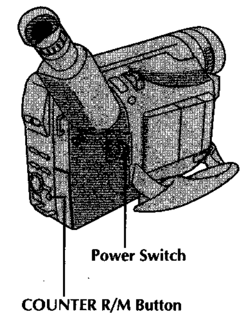
2 Press the **ZOOM** Buttons (**T/W**) on the remote control. Make sure the remote control is pointed at the camcorder's remote sensor. Pressing **T** zooms in.

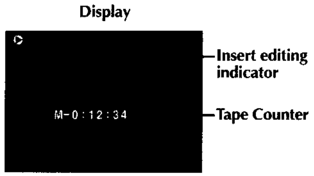
To End Zoom . . .

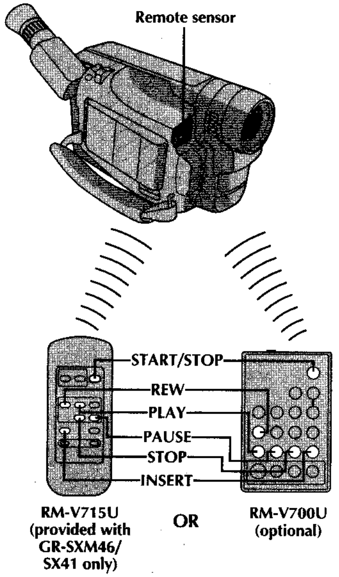
.... press and hold **W** until magnification returns to normal. Or, press **STOP** and then press **PLAY**.

NOTES:

- *Zoom can also be used during still playback.*
- *Due to digital image processing, the quality of the image may suffer.*
- *After zooming in on a still video image, when normal playback is started, the zoomed-in effect is momentarily cancelled but then resumes, returning magnification to the previously set level.*


Power Switch
COUNTER R/M Button


Display
M-0:12:34
Insert editing indicator
Tape Counter


Remote sensor
START/STOP
REW
PLAY
PAUSE
STOP
INSERT
RM-V715U (provided with GR-SXM46/ SX41 only)
OR
RM-V700U (optional)

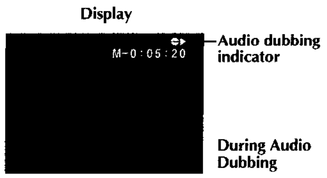
Insert Editing

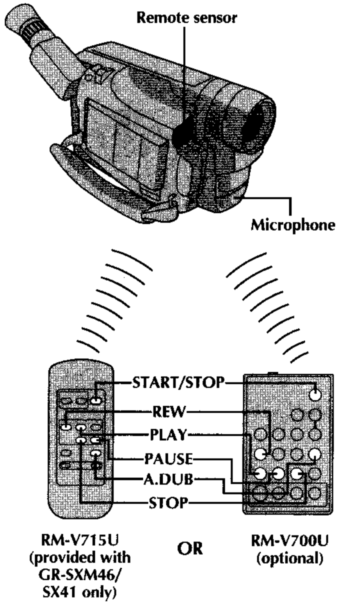
You can record a new scene onto a previously recorded tape, replacing a section of the original recording with minimal picture distortion at the in- and out-points. The original audio remains unchanged.

NOTE:
Use the remote control unit to perform this procedure.

1. Set the Power Switch to "PLAY".
2. Play back the tape, locate the Edit-Out point and press **PAUSE**.
3. Press and hold **COUNTER R/M** on the camcorder for more than 1 second to reset the tape counter, then press it again for less than 1 second so that "M" appears.
4. Press **REW** to go a little beyond the beginning of the scene you want to replace, press **PLAY** to view the recorded tape, and press **PAUSE** exactly at the Edit-In point where the new scene should start.
5. Press and hold **INSERT**, and without releasing **INSERT**, press and release **PAUSE**. The Insert Editing indicator appears and the Insert Editing mode is engaged. When the scene the camcorder is aimed at appears on the screen, go to the next step.
6. To begin Insert Editing, press **START/STOP**. When the counter reaches "0:00:00", editing stops automatically and the camcorder enters the Insert-Pause mode.
7. To end Insert Editing, press **STOP**.

NOTES:
- *During Insert Editing, the original audio will be heard from the speaker.*
- *After step **5**, Retake (☞ pg. 19) can be performed.*
- *The tape may stop slightly before or after the designated end point, and noise bars may appear. Neither indicates a defect in the unit.*
- *Only the video signal is recorded in the Insert Editing mode.*
- *If Program AE (☞ pg. 23) is set during Insert Editing, press and hold **P. AE** for more than 1 second.*


Display
M-0:05:20
Audio dubbing indicator
During Audio Dubbing


Remote sensor
Microphone
START/STOP
REW
PLAY
PAUSE
A.DUB
STOP
RM-V715U (provided with GR-SXM46/ SX41 only)
OR
RM-V700U (optional)

Audio Dubbing

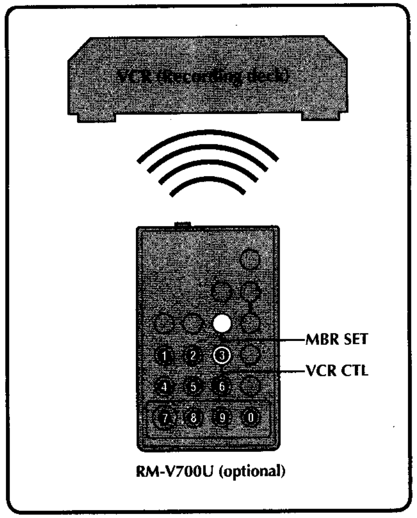
You can record a new soundtrack on a prerecorded tape. The existing original sound is erased and replaced by the sound from the built-in microphone.
Perform steps 1, 2 and 3 of the Insert Editing procedure (☞ pg. 42) before continuing.

NOTE:
Use the remote control unit to perform the following procedures.

1. Press **REW** to go a little beyond the beginning of the scene onto which you want to dub the new audio, press **PLAY** to view the recorded tape, then press **PAUSE** at exactly the point where dubbing should start.
2. Press and hold **A. DUB**, and without releasing **A. DUB**, press and release **PAUSE**. The Audio Dub-Standby mode is engaged.
3. To begin Audio Dubbing, press **PLAY**. When the counter reaches "0:00:00", Audio Dubbing stops automatically and the camcorder enters the Audio Dub-Standby mode.
4. To end Audio Dubbing, press **STOP**.

NOTES:
- *Do not press **FF** or **REW** during Audio Dub-Standby, or the edit points will not be accurate.*
- *If the microphone is too close to the TV, or if the TV's volume is too high, whistling or howling may occur.*

NOTES
(for Insert Editing and Audio Dubbing):
- *Insert Editing and Audio Dubbing may not work correctly if the tape contains blank segments.*
- *To edit/dub onto a tape, make sure the Erase Protection tab is in the position that allows recording. If not, slide the tab. Some cassettes have removable tabs. If the tab has been removed, cover the hole with adhesive tape.*
- *Do not press **STOP** during Insert Editing or Audio Dubbing, or the edit points will not be accurate.*
- *During Insert Editing and Audio Dubbing, when Insert-Pause or Audio Dub-Standby is engaged, the counter may go slightly past "0:00:00". Recording, however, stops at exactly 0:00:00.*


VCR (Recording deck)
MBR SET
VCR CTL

RM-V700U (optional)

VCR CODE LIST

VCR BRAND NAME	BUTTONS (A) (B)
AKAI	❻ ❷ ❻ ❹ ❼ ❼
BLAUPUNKT	❶ ❸
FERGUSON	❾ ❼ ❾ ❽ ❸ ❷
GRUNDIG	❶ ❹ ❸ ❹
HITACHI	❻ ❻ ❻ ❸
JVC A B C	❾ ❶ ❾ ❻ ❾ ❸
MITSUBISHI	❻ ❼ ❻ ❽
NEC	❸ ❼ ❸ ❽
PANASONIC	❶ ❸ ❶ ❼ ❶ ❶ ❾ ❹ ❶ ❽
PHILIPS	❶ ❾ ❾ ❺ ❶ ❶ ❾ ❹ ❾ ❶ ❾ ❻ ❶ ❷ ❸ ❸ ❼ ❷
SANYO	❸ ❻ ❸ ❺
SELECO, REX	❾ ❶ ❾ ❻
SHARP	❶ ❺ ❶ ⓿
SONY	❻ ❺ ❻ ⓿ ❸ ❾ ❸ ❶
THOMSON, TELEFUNKEN, SABA, NORDMENDE	❾ ❶ ❾ ❻ ❾ ❼ ❸ ❷
TOSHIBA	❻ ❾ ❻ ❶

Random Assemble Editing [R.A.Edit]

Create edited videos easily using your camcorder as the source player. You can select up to 8 "cuts" for automatic editing, in any order you like. R.A.Edit is more easily performed when the RM-V700U MBR (Multi-Brand Remote, ☞ pg. 38) is set to operate with your brand of VCR (see VCR CODE LIST), but can also be performed by operating the VCR manually.
Before operation, make sure the lithium battery is installed in the remote control RM-V700U (☞ pg. 39).

SET REMOTE/VCR CODE

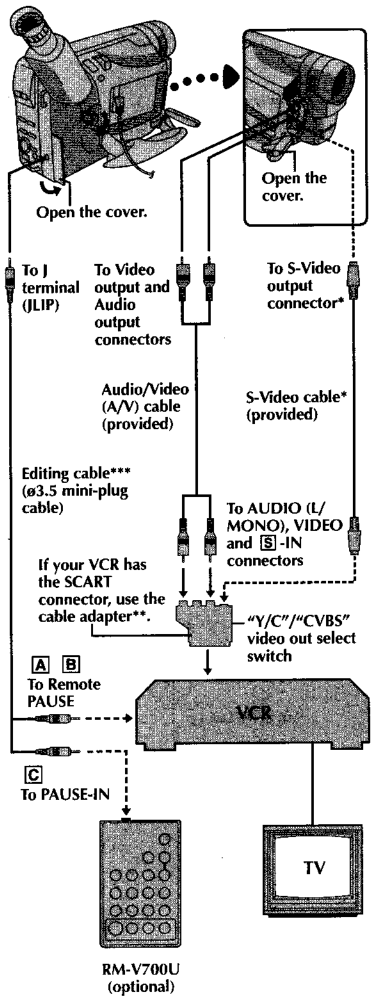
1. Turn off the power to the VCR and point the remote towards the VCR's infrared sensor. Then, referring to the VCR CODE LIST on the left, press and hold **MBR SET**, and press button (A) and then (B).
   - The code is automatically set once you release **MBR SET**, and the VCR's power comes on.
2. Make sure the VCR's power is on. Then, while holding **VCR CTL**, press the button on the remote for the desired function. The functions the remote can control are PLAY, STOP, PAUSE, FF, REW and VCR REC STBY (you do not need to press **VCR CTL** for this one).
   You are now ready to try Random Assemble Editing.

IMPORTANT

Although the MBR is compatible with JVC VCRs and those of many other makers, it may not work with yours or may offer limited functions.

NOTES:

- *If the VCR's power does not come on in step **1**, try another code from the VCR CODE LIST.*
- *Some brands of VCR do not come on automatically. In this case, turn the power on manually and try step **2**.*
- *If the remote control is not able to control the VCR, use the controls on the VCR.*
- *When the remote control's battery runs out, the VCR brand you have set will be erased.*
  In that case, replace the old battery with a new one and reset the VCR brand.


Open the cover.
Open the cover.
To J terminal (JLIP)
To Video output and Audio output connectors
To S-Video output connector*
Audio/Video (A/V) cable (provided)
S-Video cable* (provided)
Editing cable*** (ø3.5 mini-plug cable)
To AUDIO (L/MONO), VIDEO and 🅂-IN connectors
If your VCR has the SCART connector, use the cable adapter**.
"Y/C"/"CVBS" video out select switch
🄰 🄱 To Remote PAUSE
VCR
🄲 To PAUSE-IN
TV
RM-V700U (optional)

* GR-SXM46/SXM26/SX41/SX21 only.
** Provided with GR-SXM46/SXM26/SX41/SX21 only. Also commercially available.
*** Provided with GR-SXM46/SX41 only.

MAKE CONNECTIONS

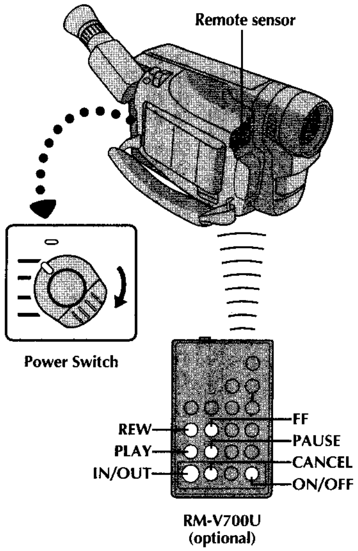
NOTE:
Set "VIDEO OUT" of the camcorder according to the system of the VCR you will be using. (☞ pg. 14)

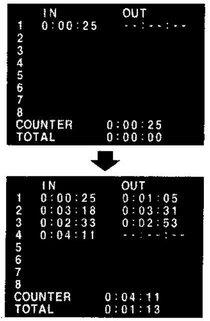
1. **🄰 JVC VCR EQUIPPED WITH REMOTE PAUSE TERMINAL**
   Connect the editing cable to the Remote PAUSE terminal.
   🄱 JVC VCR NOT EQUIPPED WITH REMOTE PAUSE TERMINAL BUT EQUIPPED WITH R.A. EDIT CONNECTOR
   Connect the editing cable to the R.A.EDIT connector.
   🄲 VCR OTHER THAN TYPE 🄰 OR 🄱
   Connect the editing cable to the RM-V700U's PAUSE-IN connector.
2. Insert a recorded tape into the camcorder and set the Power Switch to "PLAY".
3. Turn the VCR power on, insert a recordable tape and engage the AUX mode (refer to the VCR's instructions).

NOTES:

- *If your VCR has an S-Video input connector or a SCART connector compatible with Y/C signals, connect the camcorder and the VCR using the provided S-Video cable. This can improve the dubbed picture quality (GR-SXM46/SXM26/SX41/SX21 only).*
- *If you use the cable adapter**, set the "Y/C"/"CVBS" video out select switch as required.*
  Y/C : When connecting to a VCR which accepts Y/C signals and uses an S-Video cable (GR-SXM46/SXM26/SX41/SX21 only).
  CVBS : When connecting to a VCR which does not accept Y/C signals and uses an audio/video cable.
  *** Provided with GR-SXM46/SXM26/SX41/SX21 only. Also commercially available.*
- *If you are using a SECAM VCR, set "VIDEO OUT" to "SECAM" (GR-SXM46/SXM26/SX41/SX21 only, ☞ pg. 26).*

CONTINUED ON NEXT PAGE.


Remote sensor
Power Switch
REW
PLAY
IN/OUT
FF
PAUSE
CANCEL
ON/OFF
RM-V700U
(optional)



```
    IN          OUT
1   0:00:25     --:--:--
2
3
4
5
6
7
8
COUNTER       0:00:25
TOTAL         0:00:00
```

```
    IN          OUT
1   0:00:25     0:01:05
2   0:03:18     0:03:31
3   0:02:33     0:02:53
4   0:04:11     --:--:--
5
6
7
8
COUNTER       0:04:11
TOTAL         0:01:13
```

SELECT SCENES

4 Point the remote control at the camcorder's remote sensor. Press **PLAY**, then press **ON/OFF** on the remote control. The R.A. Edit counter display appears.

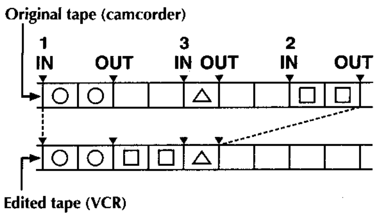
5 Press **REW** or **FF** to locate the beginning of the scene you want, then press **IN/OUT** to register that point. The data appears under "IN" on the display.

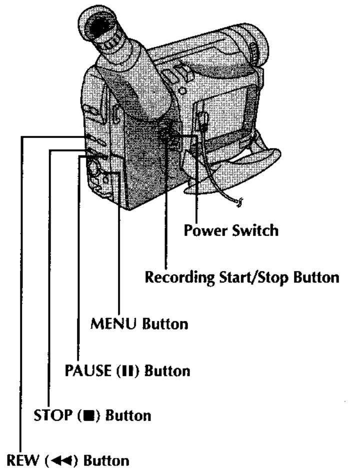
6 Press **REW** or **FF** to locate the end of the scene and press **IN/OUT** to register it.
- The data appears under "OUT" on the display.
- The total time of the registered scene(s) is displayed at the bottom of the screen.

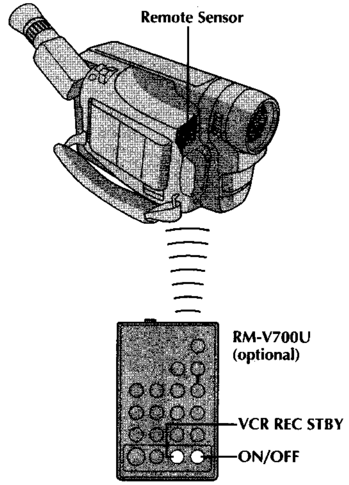
7 Repeat steps **5** and **6** for each additional scene (as many as 8).

8 To make corrections, press **CANCEL** during steps **5** and **6** to erase the most recently registered point.

NOTES:
- *There must be at least one second between an in-point and its corresponding out-point.*
- *To ensure correct operation, there should be at least 15 seconds between an out-point and the next in-point.*
- *Blank portions of a tape cannot be registered as in-points or out-points.*
- *If it takes more than 5 minutes to search for an in-point, the VCR's Record-Pause mode is cancelled and editing does not take place.*
- *Pressing* ***ON/OFF*** *clears all in- and out-points from memory.*
- *Leave a small margin for error around each in-point to ensure the scene is recorded in its entirety.*
- *Turning off the camcorder's power erases all registered in- and out-points.*


Original tape (camcorder)
1
IN
OUT
3
IN
OUT
2
IN
OUT
○
○
△
□
□
○
○
□
□
△
Edited tape (VCR)


Power Switch
Recording Start/Stop Button
MENU Button
PAUSE (II) Button
STOP (■) Button
REW (◄◄) Button


Remote Sensor
RM-V700U
(optional)
VCR REC STBY
ON/OFF

AUTOMATIC EDITING TO VCR

9 Rewind the tape in the camcorder to the beginning of the scene you want to edit and press **PAUSE**.

10 Point the remote control towards the VCR's infrared sensor and press **VCR REC STBY**, or manually engage the VCR's Record-Pause mode.

11 Press **MENU** on the camcorder to begin Automatic Editing, and the previously selected scenes are copied to the VCR in the specified order.
While editing, the R.A. Edit counter of the scene which is being copied is shown with a blinking highlight.
- Pressing **START/STOP** on the remote control does not start editing.

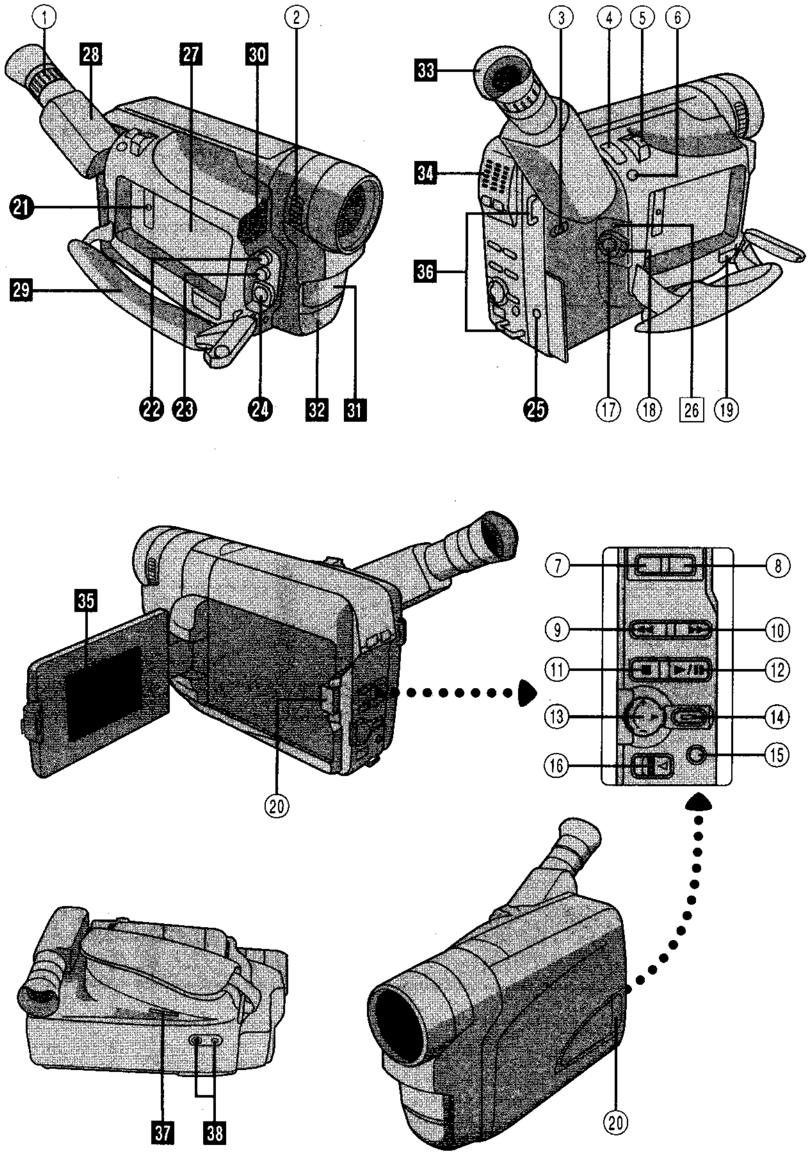
12 When all selected scenes have been copied, the camcorder and VCR enter the Still or Pause mode. Press **STOP** on both units. To make the R.A. Edit counter display disappear, press **ON/OFF**.
- When finished editing, be sure to disconnect the editing cable and the audio/video cable.

NOTES:
- *If you performed step* ***1*** 🄲 *on page 45 ("MAKE CONNECTIONS"), keep the remote control pointed at the VCR during editing.*
- *The on-screen display only appears while the camcorder searches for each scene.*
- *There may be noise at in- or out-points on the edited tape with certain VCRs.*

If, after following the steps in the chart below, the problem still exists, please consult your JVC dealer.

The camcorder is a microcomputer-controlled device. External noise and interference (from a TV, a radio, etc.) might prevent it from functioning properly. In such cases, first disconnect its power supply unit (battery pack, AC Power Adapter/Battery Charger, etc.) and clock battery; and then re-connect it and proceed as usual from the beginning.

SYMPTOM	POSSIBLE CAUSE(S)
POWER	
No power is supplied.	● The battery pack has not been attached correctly (☞ pg. 6). ● The battery pack is not charged (☞ pg. 6). ● The power supply has not been correctly connected (☞ pg. 7).
The power suddenly goes off and does not come back on by itself.	● The battery pack has completely discharged. ● Remove the cassette and disconnect the power source, then after a few minutes, try turning the power back on. If it still does not come on, consult your nearest JVC dealer.
RECORDING	
Recording cannot be performed.	● Make sure the Erase Protection tab is in the position that allows recording. If not, slide the tab. Some cassettes have removable tabs. If the tab has been removed, cover the hole with adhesive tape (☞ pg. 11).
Recording does not start.	● The camcorder Power Switch has not been set to "CAMERA" ("AUTO" or "PRO".) (☞ pg. 16).
Animation or Time-Lapse is not available.	● Before recording in the Animation mode at the very beginning of a tape, set the camcorder to the Recording mode for about 5 seconds, so that the tape runs smoothly. Using the Fade-in function at this point is a good way to begin an animated programme (☞ pg. 29, 40).
PLAYBACK	
The tape is running, but there is no playback picture.	● The TV has not been set to its VIDEO mode or channel. ● If A/V connection is used, the TV's VIDEO/TV Switch has not been set to VIDEO.
Playback picture is blurred or interrupted.	● The video heads are dirty or worn out. Consult your nearest JVC dealer for head cleaning or replacement.
The counter indication is blurred during Still playback.	● This is normal.
The playback picture on the connected TV is without colour.	● "VIDEO OUT" has not been set correctly in the Menu Screen (☞ pg. 26).
TAPE TRANSPORT	
The tape stops during fast-forward or rewind.	● The Counter Memory Function has been activated (☞ pg. 34).
Rewinding or fast-forwarding cannot be performed.	● The tape is already fully wound on one reel or the other.
OTHER	
During recording, the indications do not appear.	● Press **DISPLAY** for longer than 1 second to make the indications appear (☞ pg. 17).
The tape will not eject.	● The battery pack is running low. ● If the LCD monitor is not open over 60 degrees, the **EJECT** Switch does not function.
Some functions are not available.	● The Power Switch is set to "AUTO". ● Certain combinations of modes or effects are not possible to use.
Vertical white lines appear when shooting a very bright object.	● This sometimes occurs when the contrast between the background and the object is great. It is not a defect of the camcorder.
Bright, crystal-shaped spots appear in the LCD monitor and the viewfinder.	● Sunlight is directly entering the lens. This is not a defect of the camcorder.
The rear of the LCD monitor is hot.	● The light used to illuminate the LCD monitor causes it to be hot. Close the LCD monitor to turn it off or set the Power Switch to "OFF", and let the unit cool down.
Colored bright spots appear all over the LCD monitor or the viewfinder.	● The LCD monitor and the viewfinder are made with high-precision technology. However, black spots or bright spots of light (red, green or blue) may appear constantly on the LCD monitor or in the viewfinder. These spots are not recorded on the tape. This is not due to any defect of the unit. (Effective dots: more than 99.99 %.)
The indicators and the picture colour on the LCD monitor are not clear.	● This may occur when the surface or the edge of the LCD monitor is pressed.
The LCD monitor, the viewfinder and the lens have become dirty (ex. fingerprints).	● Wipe them gently with a soft cloth. Gently wipe in a semicircular motion, as wiping strongly spreads the stain and it won't come out easily.
An error number (i.e. E03) appears.	● Turn the camcorder's power off, then disconnect the power source. After a few minutes, try turning the power on again. If the error number still appears in the viewfinder, consult your nearest JVC dealer.
The image is out of focus.	● The dioptre needs to be adjusted (☞ pg. 15). ● The scene being shot is adversely affecting the operation of Auto Focus (☞ pg. 31).
The date and time displays disappear.	● If you remove the power source from the camcorder while the power is on, all settings and selections are erased. Make sure to turn the camcorder's power off before disconnecting the power source.
The wrong date and time are displayed/recorded.	● If you have not performed Date/Time Setting (☞ pg. 9), the date and time are not displayed/recorded correctly. Be sure that Date/Time setting is carried out.
Even though the lens cover is open, the Lens Cover Warning indicator blinks.	● The Lens Cover Warning indicator may blink when the camcorder is used in dark areas, regardless of the position of the lens cover.



Controls

① Diopter Adjustment Control ☞ pg. 15

② Lens Cover Open/Close Ring ☞ pg. 16

③ Video Light Switch
[LIGHT OFF/AUTO/ON] (GR-SXM46/SXM26/SX41/FXM161 only) ☞ pg. 20

④ Snapshot Button [SNAPSHOT]
(GR-SXM46/SX41 only) ☞ pg. 21
5-Second Recording Button [5 SEC REC]
(GR-SXM26/SX21/FXM16/FXM161/FX11 only) ☞ pg. 19

⑤
- Power Zoom Lever [T/W] ☞ pg. 18
- Speaker Volume Control [VOL.] (GR-SXM46/SXM26/FXM16/FXM161 only) ☞ pg. 33

⑥
- Picture Stabilizer Button [P.STABILIZER] ☞ pg. 18
- Time Base Corrector Button ☞ pg. 34

⑦ Program AE Button [P.AE] ☞ pg. 23

⑧ Fade/Wipe Button [EFFECT] ☞ pg. 22

⑨
- Retake Rewind Button [RETAKE R] ☞ pg. 19
- Quick Review Button [⊡R] ☞ pg. 19
- Rewind Button [REW] ☞ pg. 33

⑩
- Retake Forward Button [RETAKE F] ☞ pg. 19
- Fast-Forward Button [FF] ☞ pg. 33

⑪ Stop Button [STOP] ☞ pg. 33

⑫ Play/Pause Button
[PLAY/PAUSE] ☞ pg. 33

⑬
- Select Wheel [PUSH] ☞ pg. 24
- Bright Dial [BRIGHT] (GR-SXM46/SXM26/FXM16/FXM161 only) ☞ pg. 16, 33

⑭ MENU/DISPLAY Button ☞ pg. 17, 24

⑮ Counter Reset/Memory Button
[COUNTER R/M] ☞ pg. 34

⑯ EJECT Switch ☞ pg. 11

⑰ Recording Start/Stop Button ☞ pg. 16

⑱ Power Switch
[PLAY, OFF, AUTO, PRO.] ☞ pg. 16, 33

⑲ Battery Release Switch
[BATTERY RELEASE] ☞ pg. 7

⑳ Close Button ☞ pg. 11

Connectors

㉑ DC IN Connector ☞ pg. 7

The connectors ㉒ to ㉕ are located beneath the cover.

㉒ Video Output Connector ☞ pg. 36

㉓ Audio Output Connector ☞ pg. 36

㉔ S-Video Output Connector
(GR-SXM46/SXM26/SX41/SX21 only) ☞ pg. 36

㉕ J Terminal [JLIP (Joint Level Interface Protocol) Connector]
- Connect the editing cable when performing Random Assemble Editing (☞ pg. 44 – 47).
- It is used to connect the camcorder to a device such as a personal computer.
  For further details consult your nearest JVC dealer.
- JLIP-controlled editing from camcorder to VCR is not possible if the VCR is not equipped with a J terminal.

Indicators

26 Power Lamp ☞ pg. 16

Other Parts

27 Battery Pack Mount ☞ pg. 7

28 Viewfinder ☞ pg. 15

29 Grip Strap ☞ pg. 15

30
- Camera sensor
  Be careful not to cover this area; a sensor necessary for shooting is built-in here.
- Remote Sensor ☞ pg. 39

31 Video Light (GR-SXM46/SXM26/SX41/FXM161 only) ☞ pg. 20

32 Microphone ☞ pg. 43

33 Eyepiece

34 Speaker (GR-SXM46/SXM26/FXM16/FXM161 only) ☞ pg. 33

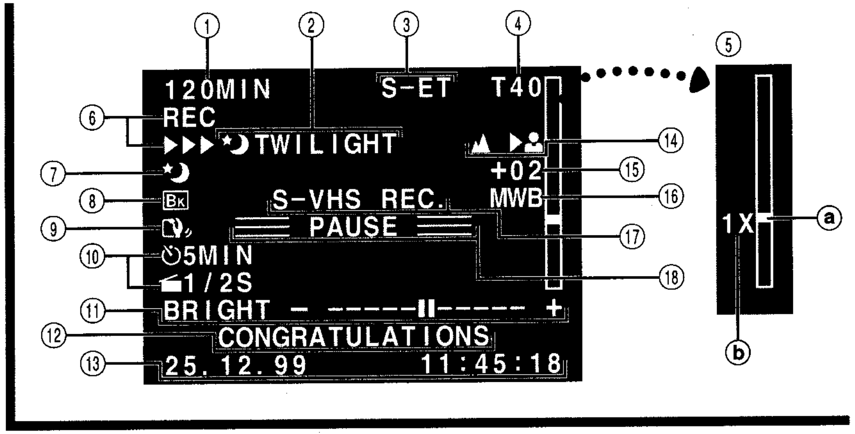
35 LCD Monitor (GR-SXM46/SXM26/FXM16/FXM161 only) ☞ pg. 17

36 Shoulder Strap Eyelets ☞ pg. 15

37 Clock Battery Slot ☞ pg. 8

38 Tripod Mounting Socket ☞ pg. 15

Indications During Recording



① Tape Remaining Time .... ☞ pg. 17
Blinks when a tape is about to reach its end.

②,⑦ Program AE Indicator .... ☞ pg. 23
Displayed at ② for approx. 2 seconds when Program AE with special effects is switched from one mode to another by pressing **P.AE.**, then only the indicator remains at ⑦.

②,⑧ Fade/Wipe-Standby Indicator .... ☞ pg. 22
Displayed at ② for approx. 2 seconds when the Fade/Wipe is switched from one effect to another by pressing **EFFECT**, then only the indicator remains at ⑧.

③ Recording Format Indicator (S/S-ET) (GR-SXM46/SXM26/SX41/SX21 only) ... ☞ pg. 12

④ Tape Length Indicator .... ☞ pg. 10

⑤ Zoom Indicator Bar .... ☞ pg. 18
- ⓐ Zoom Level Indicator
- ⓑ Approximate Zoom Ratio

⑥ Recording Indicator .... ☞ pg. 16

⑨ Picture Stabilizer Indicator .... ☞ pg. 18

⑩ • Interval Time/Recording Time Indicator .... ☞ pg. 28, 40
• 5 Sec. Rec Mode Indicator (GR-SXM26/SX21/FXM16/FXM161/FX11 only) .... ☞ pg. 19

⑪ Bright Level Indicator (GR-SXM46/SXM26/FXM16/FXM161 only) .... ☞ pg. 16

⑫ Instant Title Display .... ☞ pg. 27

⑬ Date/Time Display .... ☞ pg. 27

⑭ Focus Indicator .... ☞ pg. 31

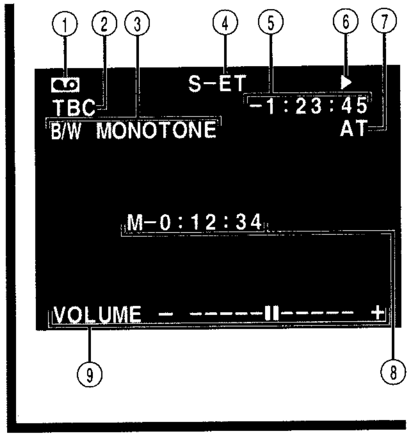
⑮ Exposure Control Level Counter .... ☞ pg. 30

⑯ White Balance Mode Indicator .... ☞ pg. 32

⑰ S-VHS/S-VHS ET Recording Indicator (GR-SXM46/SXM26/SX41/SX21 only) ... ☞ pg. 12

⑱ Record–Standby Mode Indicator .... ☞ pg. 16

Indications During Playback



① • 📼 : Cassette Indicator
Displayed when a tape is loaded.
• ▷: Insert Editing Indicator .... ☞ pg. 42
Displayed during Insert Editing.

② TBC Indicator .... ☞ pg. 34

③ Playback Special Effect Indicator (GR-SXM46/SX41 only) .... ☞ pg. 34

④ Recording Format Indicator (S/S-ET) (GR-SXM46/SXM26/SX41/SX21 only) ... ☞ pg. 12

⑤ Tape Counter .... ☞ pg. 34, 42

⑥ Tape Running Indicator
- ▶ : Playback
- ▶▶ : Fast-Forward/Shuttle Search
- ◀◀ : Rewind/Shuttle Search
- ❚❚ : Pause
- ⊖▶ : Audio Dubbing

⑦ Tracking Indicator .... ☞ pg. 34

⑧ Tape Counter .... ☞ pg. 42
Displayed only during Insert Editing.

⑨ • BRIGHT: Bright Level Indicator (GR-SXM46/SXM26/FXM16/FXM161 only) .... ☞ pg. 33
• VOLUME: Speaker Volume Indicator (GR-SXM46/SXM26/FXM16/FXM161 only) .... ☞ pg. 33

Warning Indications

Indications	Function
🔋	**Displays the battery remaining power.** **Remaining power level: high. It does not necessarily mean that the battery pack is fully charged.—— 🔋→🔋→🔋→▭** **Remaining power level: exhausted——** **As the battery power comes close to nil, the battery indicator ▭ blinks (battery power warning).** **When the battery power is exhausted, power turns off automatically.**
📼	**Blinks when no cassette is loaded, or when the Erase Protection tab is not in the position that allows recording. (☞ pg. 11)**
⊘	**Blinks for approx. 10 seconds when the power is turned on. This display also blinks when the clock (lithium) battery is either not installed or has discharged. Install or replace the old battery with a new one. (☞ pg. 8)**
TAPE END	**Appears when the tape ends during recording, playback or fast-forward. (☞ pg. 17)**
LENS COVER	**Blinks for approx. 5 seconds when the camcorder is turned on with the lens cover closed. (☞ pg. 16)**
💧 **CONDENSATION OPERATION PAUSED PLEASE WAIT**	**These 2 warnings appear alternately every 3 seconds if condensation occurs. In this case, all functions except tape eject and power on/off are disabled. Remove the tape, turn the unit off (without removing the power supply), wait a few minutes for the warnings to clear, and turn it on again.**
⊗ **HEAD CLEANING REQUIRED USE CLEANING CASSETTE**	**These 2 warnings appear alternately every 3 seconds if dirt is detected on the heads during recording. In this case, use an optional cleaning cassette. If the warning remains after cleaning, consult your nearest JVC dealer.**
E01—E06 **UNIT IN SAFEGUARD MODE REMOVE AND REATTACH BATTERY**	**The error indications (E01 — E06) show what type of malfunction has occured. If an error indication and warning appear, turn the unit off, remove the power supply (battery, etc.) and wait a few minutes for them to clear. When it does, you can resume using the camcorder. If the indication remains, consult your nearest JVC dealer.**

Video Light

DANGER:

- The video light becomes extremely hot. Do not touch it either while in operation or soon after turning it off, otherwise serious injury may result.
- Do not place the camcorder into the carrying case immediately after using the video light, since it remains extremely hot for some time.
- When operating, keep a distance of about 30 cm between the video light and people or object.
- Do not use near flammable or explosive materials.
- It is recommended that you consult your nearest JVC dealer for replacing the video light.

General Battery Precautions

If the remote control or cassette adapter is not functioning even if it is being operated correctly, the batteries are exhausted. Replace them with fresh ones.

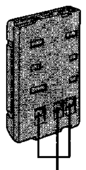
Use only the following batteries:

Remote control .... R03 (AAA) size x 2
(RM-V715U)
Cassette adapter .... R6 (AA) size x 1
(C-P6U or C-P7U)

Please make note of the following rules for battery use. When misused, the batteries can leak or explode.

1. When replacing batteries, refer to page 39 for the remote control, or read the cassette adapter (C-P6U/C-P7U) instructions.
2. **Do not** use any different size of batteries from those specified.
3. Be sure to install batteries in the correct direction.
4. **Do not** use rechargeable batteries.
5. **Do not** expose the batteries to excessive heat as they can leak or explode.
6. **Do not** dispose of the batteries in a fire.
7. Remove the batteries from the unit if it is to be stored for an extended period to avoid battery leakage which can cause malfunctions.

Battery Packs



The battery packs are nickel-cadmium or nickel metal-hydride batteries. Before using the supplied battery pack or an optional battery pack, be sure to read the following cautions:

1. **To avoid hazard . . .**
   - ... **do not** burn.
   - ... **do not** short-circuit the terminals.
   - ... **do not** modify or disassemble.
   - ... use only specified chargers.
2. **To prevent damage and prolong service life . . .**
   - ... **do not** subject to unnecessary shock.
   - ... avoid repeated charging without fully discharging.
   - ... charge in an environment where temperatures are within the tolerances shown in the chart below. This is a chemical reaction type battery—cooler temperatures impede chemical reaction, while warmer temperatures can prevent complete charging.
   - ... store in a cool, dry place. Extended exposure to high temperatures will increase natural discharge and shorten service life.
   - ... avoid prolonged uncharged storage.
   - ... remove from charger or powered unit when not in use, as some machines use current even when switched off.

NOTES:

- *It is normal for the battery pack to be warm after charging, or after use.*
  Temperature Range Specifications
  Charging .... 10°C to 35°C
  Operation .... 0°C to 40°C
  Storage .... –10°C to 30°C
- *Recharging time is based on room temperature of 20°C.*
- *The lower the temperature, the longer recharging takes.*

Cassettes

To properly use and store your cassettes, be sure to read the following cautions:

1. **During use . . .**
   - ... make sure the cassette bears the S-VHS-C or VHS-C mark.
   - ... be aware that recording onto prerecorded tapes automatically erases the previously recorded video and audio signals.
   - ... make sure the cassette is positioned properly when inserting.
   - ... do not load and unload the cassette repeatedly without allowing the tape to run at all. This slackens the tape and can result in damage.
   - ... do not open the front tape cover. This exposes the tape to fingerprints and dust.
2. **Store cassettes . . .**
   - ... away from heaters or other heat sources.
   - ... out of direct sunlight.
   - ... where they won't be subject to unnecessary shock or vibration.
   - ... where they won't be exposed to strong magnetic fields (such as those generated by motors, transformers or magnets).
   - ... vertically, in their original cases.

Main Unit

1. **For safety, DO NOT . . .**
   - ... open the camcorder's chassis.
   - ... disassemble or modify the unit.
   - ... short-circuit the terminals of the battery pack. Keep it away from metallic objects when not in use.
   - ... allow inflammables, water or metallic objects to enter the unit.
   - ... remove the battery pack or disconnect the power supply while the power is on.
   - ... leave the battery pack attached when the camcorder is not in use.
2. **Avoid using the unit . . .**
   - ... in places subject to excessive humidity or dust.
   - ... in places subject to soot or steam such as near a cooking stove.
   - ... in places subject to excessive shock or vibration.
   - ... near a television set.
   - ... near appliances generating strong magnetic or electric fields (speakers, broadcasting antennas, etc.).
   - ... in places subject to extremely high (over 40°C) or extremely low (under 0°C) temperatures.
3. **DO NOT leave the unit . . .**
   - ... in places of over 50°C.
   - ... in places where humidity is extremely low. (below 35%) or extremely high (above 80%).
   - ... in direct sunlight.
   - ... in a closed car in summer.
   - ... near a heater.
4. **To protect the unit, DO NOT . . .**
   - ... allow it to become wet.
   - ... drop the unit or strike it against hard objects.
   - ... subject it to shock or excessive vibration during transportation.
   - ... keep the lens directed at extremely bright objects for long periods.
   - ... direct the eyepiece of the viewfinder at the sun.
   - ... carry it by holding the viewfinder or the LCD monitor. Be sure to hold the main unit with both hands or use the grip.
   - ... swing it excessively when using the shoulder strap.

LCD Monitor

1. **To prevent damage to the LCD monitor, DO NOT . . .**
   ... push it strongly or apply any shocks.
   ... place the camcorder with the LCD monitor on the bottom.
2. **To prolong service life . . .**
   ... avoid rubbing it with coarse cloth.
3. **Be aware of the following phenomena for LCD monitor use. These are not malfunctions:**

- While using the camcorder, the surface around the LCD monitor and/or the back of the LCD monitor may heat up.
- If you leave power on for a long time, the surface around the LCD monitor becomes hot.

About moisture condensation . . .

- You may have observed that pouring a cold liquid into a glass will cause drops of water to form on the glass' outer surface. This same phenomenon occurs on the head drum of a camcorder when it is moved from a cool place to a warm place, after heating a cold room, under extremely humid conditions or in a place directly subjected to the cool air from an air conditioner.
- Moisture on the head drum can cause severe damage to the video tape, and can lead to internal damage to the camcorder itself.

Serious malfunctioning

If malfunctioning occurs, stop using the unit immediately and consult your local JVC dealer.

For Your Maintenance

1. **After Use**
   ① Set the Power Switch to "OFF" to turn off the camcorder.
   ② Open the LCD monitor to an angle of over 60 degrees. Slide **EJECT** to open the cassette holder, then remove the cassette.
   ③ Close and lock the cassette holder by pressing the Close button.
   ④ Close and lock the LCD monitor.
   ⑤ Slide **BATTERY RELEASE** to remove the battery pack.
   ⑥ Turn the **LENS COVER** Open/Close Ring to close the lens cover.
2. **Cleaning The Camcorder**
   ① **CLEAN EXTERIOR**
   Wipe gently with a soft cloth.
   Put cloth in diluted mild soap and wring it well to wipe off heavy dirt, then wipe again with a dry cloth.
   ② **CLEAN LCD MONITOR**
   Open the LCD monitor and wipe it gently with a soft cloth. Be careful not to damage the monitor. Close the LCD monitor.
   ③ **CLEAN LENS**
   Blow it with a blower brush, then wipe it gently with lens cleaning paper.
   ④ **REMOVE EYEPIECE**
   Turn the eyepiece counterclockwise and pull it out.
   ⑤ **CLEAN VIEWFINDER**
   Remove dust using a blower brush.
   ⑥ **RE-ATTACH EYEPIECE**
   Re-attach the eyepiece and turn it clockwise.

NOTES:

- *Avoid using strong cleaning agents such as benzine or alcohol.*
- *Cleaning should be done only after the battery pack has been removed or other power units have been disconnected.*
- *Mould may form if the lens is left dirty.*
- *When using a cleaner or chemically treated cloth, refer to the cautions that came with it.*
- *When removing the eyepiece, be sure to hold the viewfinder securely.*

SPECIFICATIONS

Camcorder

General

Format : S-VHS (GR-SXM46/SXM26/SX41/SX21 only)/VHS PAL standard
Power source : DC 6.0 V ⎓
Power consumption
  LCD monitor* off, viewfinder on : 4.2 W (GR-SXM46/SXM26/FXM16/FXM161)
  3.7 W (GR-SX41/SX21/FX11)
  LCD monitor* on, viewfinder off : 4.6 W (GR-SXM46/SXM26/FXM16/FXM161)
  LCD monitor* on, viewfinder on : 5.2 W (GR-SXM46/SXM26/FXM16/FXM161)
  Video light** : 3.0 W

* GR-SXM46/SXM26/FXM16/FXM161 only.
** GR-SXM46/SXM26/SX41/FXM161 only.

Signal system : PAL-type
Video recording system
  Luminance : FM recording
  Color : Converted sub-carrier direct recording
  Conforms to VHS standard
Cassette : S-VHS-C / VHS-C cassette
Tape speed : 23.39 mm/sec.
Recording time (max.) : 60 minutes (with EC -60 cassette)
Operating temperature : 0°C to 40°C
Operating humidity : 35% to 80%
Storage temperature : –20°C to 50°C
Weight : Approx. 900 g (GR-SXM46)
Approx. 890 g (GR-SXM26/FXM161)
Approx. 880 g (GR-FXM16)
Approx. 750 g (GR-SX41/SX21/FX11)
Dimensions (W x H x D) : 198 mm x 119 mm x 99 mm (GR-SXM46/SXM26/FXM16/FXM161)
198 mm x 119 mm x 91 mm (GR-SX41/SX21/FX11)
(with the LCD monitor* closed and with the viewfinder fully tilted downward)

* GR-SXM46/SXM26/FXM16/FXM161 only.

Pickup : 1/4" format CCD
Lens : F1.6, f = 3.9 to 62.4 mm, 16:1 power zoom lens with auto iris and macro control, filter diameter 40.5 mm
Viewfinder : Electronic viewfinder with *0.5" black/white CRT*
White balance adjustment : Auto/Manual adjustment
LCD monitor (GR-SXM46/SXM26/FXM16/FXM161 only) : 3" diagonally measured, LCD panel/TFT active matrix system (GR-SXM46)
: 2.5" diagonally measured, LCD panel/TFT active matrix system (GR-SXM26/FXM16/FXM161)
Speaker (GR-SXM46/SXM26/FXM16/FXM161 only) : Monaural

Connectors

JLIP : ø3.5 mm, 4-pole, mini-head jack (compatible with RC-5325 plug)
Video : 1 V (p-p), 75 Ω unbalanced, analogue output (via Video output connector)
Audio : 300 mV (rms), 1 kΩ analogue output (via Audio output connector)
S-Video (GR-SXM46/SXM26/SX41/SX21 only) : **Y** : 1 V (p-p), 75 Ω, analogue output
C : 0.29 V (p-p), 75 Ω, analogue output

AC Power Adapter/Charger AA-V16EG

Power requirement : AC 110 V to 240 V∿, 50 Hz/60 Hz
Power consumption : 23 W
Output
  Charge : DC 8.5 V ⎓, 1.3 A
  VTR : DC 6.3 V ⎓, 1.8 A
Charging system : Constant current, peak detection, timer controlled
Dimensions (W x H x D) : 125 mm x 42 mm x 68 mm
Weight : Approx. 250 g

Optional Accessories

- **Battery Packs BN-V12U, BN-V20U, BN-V856U**
- **Car Battery Charger BH-V3E**
- **Compact S-VHS (S-VHS-C) Cassettes SE-C45/30**
- **Compact VHS (VHS-C) Cassettes EC-60/45/30**
- **Remote Control Unit RM-V700U**
- **Active Carrying Bag CB-V7U**
- **Cassette Adapter C-P7U**

Some accessories are not available in some areas. Please consult your nearest JVC dealer for details on accessories and their availability.

E & O.E. Design and specifications subject to change without notice.

SECTION 1
DISASSEMBLY

1.1 SERVICE CAUTIONS

1.1.1 Precautions

1. Before disassembling/re-assembling the set as well as soldering parts, make sure to disconnect the power cable.
2. When disconnecting/connecting connectors, pay enough attention to wiring not to damage it.
3. In general, chip parts such as resistor, shorting jumpers (0-ohm resistor), ceramic capacitors, diodes, etc. can not be reused after they were once removed.
4. When installing parts, be careful not to do with other parts as well as not to damage others.
5. When removing ICs, be careful not to damage circuit patterns.
6. Tighten screws properly during the procedures. Unless specified otherwise, tighten screws at torque of 0.196 N·m (2.0 kgf·cm).

1.1.2 How to read the disassembly and assembly

(For Cabinet Parts)

STEP /LOC NO.	PART	Fig. No.	REMOVAL	
			*UNLOCK/RELEASE/ UNPLUG/UNCLAMP/ UNSOLDER	Note
①	CASSETTE COVER ASSEMBLY	C1	2(S1)	–
②	UPPER CASE	C2	2(S2a), (S2b),(L2a), (L2b) (L2c)	<NOTE 1>
③	COVER (VF)	C3	2(S3), (L3)	–

↑ ↑ ↑ ↑ ↑

(1) (2) (3) (4) (5)

(1) Order of steps in Procedure
When reassembling, preform the step(s) in the reverse order. These numbers are also used as the identification (location) No. of parts Figures.

(2) Part to be removed or installed.

(3) Fig. No. showing Procedure or Part Location.

C = Cabinet
CA = Camera
D = Deck

(4) Identification of part to be removed, unhooked, unlocked, released, unplugged, unclamped or unsoldered.

P = Spring
W = Washer
S = Screw
* = Unhook, unlock, release, unplug or unsolder.
2(S3) = 2 Screws (S3)

(5) Adjustment information for installation.

1.1.3 Connection of the wires

1. Pull the connector structure upward to release the clamp when removing or inserting the flat wire cable.

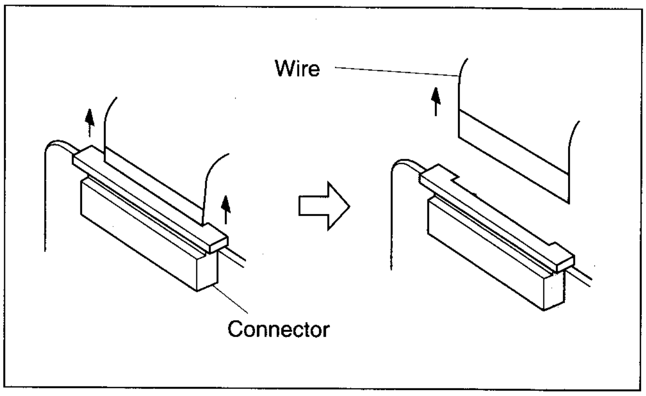
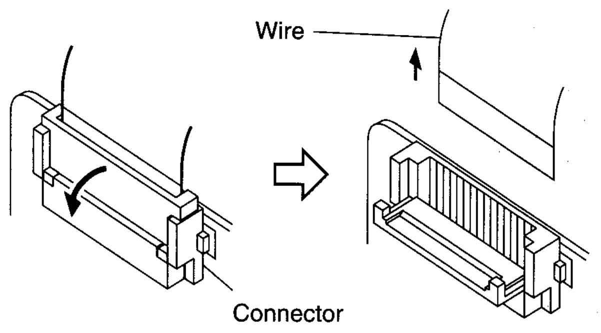


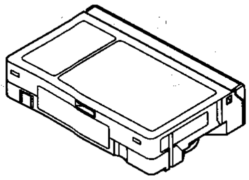
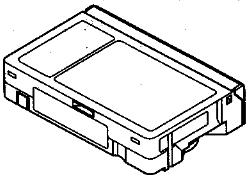
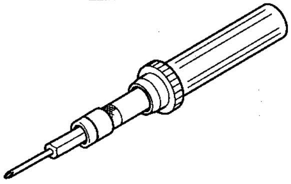
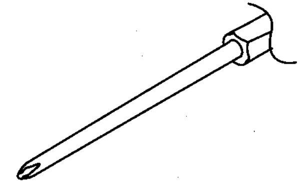
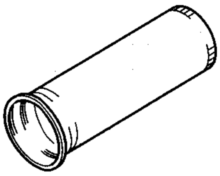
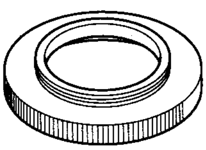
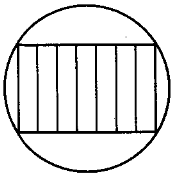
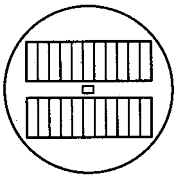
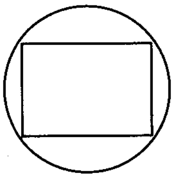
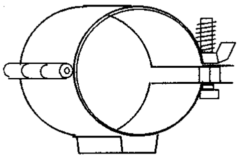
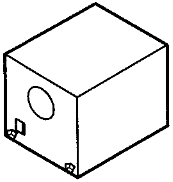
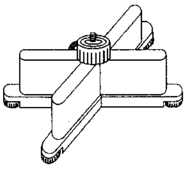
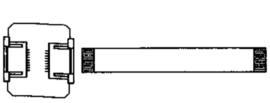
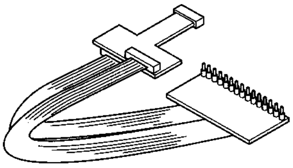
Fig. 1-1-1



NOTE: *After removing the wire, return the stopper to its original position, because it is apt to come off if it is left open.*

Fig. 1-1-2

1.2 TOOLS REQUIRED FOR ADJUSTMENTS

1 Alignment tape (for SP interchangeability) MHPE-C	2 Alignment tape (for N. SP PB Y/C level) MHVE-2C
	
3 Torque driver YTU94088	4 Bit YTU94088-003
	
5 INF adjustment lens YTU92001B	6 Conn. ring YTU92001-111
	
7 Color bar chart YTU92001-051	8 Gray scale chart YTU92001-052
	
9 White balance chart YTU92001-053	10 INF lens holder YTU94087
	
11 Light box YTU93072A-1	12 Camera stand YTU93079
	
13 Patch cord YTU93097A	14 Jig connector cable YTU93082E
	

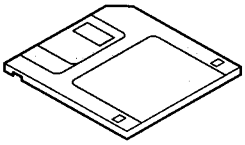
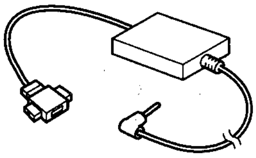
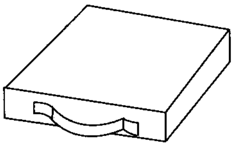
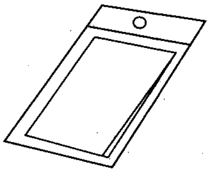
15 Service support system software YTU94057-43	16 PC cable QAM0099-002
	
17 Soldering kit YTU96016C	18 Cleaning cloth KSMM-01
	

Table 1-2-1

1,2. Alignment tape
To be used for check and adjustment of interchangeability of the mechanism.
(Video: Color bar signal, Audio: Non-signal)

3. Torque driver
Be sure to use to fastening the mechanism and exterior parts because those parts must strictly be controlled for tightening torque.

4. Bit
This bit is slightly longer than those set in conventional torque drivers.

5. INF adjustment lens
To be used for adjustment of the camera system.

6. Conn. ring
The connector ring to attach the INF. lens to the head of the OP lens.

7. Color bar chart
To be used for adjustment of the camera system.

8. Gray scale chart
To be used for adjustment of the camera system.

9. White balance chart
To be used for adjustment of the camera system. (for white balance adjustment)

10. INF lens holder
To be used together with the camera stand (11) for operating the VideoMovie in the stripped-down condition such as the status without the exterior parts or for using commodities that are not yet conformable to the interchangeable ring.

11. Light box
To be used for adjustment of the camera system.

12. Camera stand
To be used together with the INF adjustment lens holder.

13. Patch cord
To be used to connect electrical parts, P.C. boards, etc. for servicing.

14. JIG connector cable
Connected to CN25 of the main board and used for measuring error rates, etc.

15. Service support software
To be used for adjustment with a personal computer.

16. PC cable
To be used to connect the VideoMovie and a personal computer with each other when a personal computer is used for adjustment.

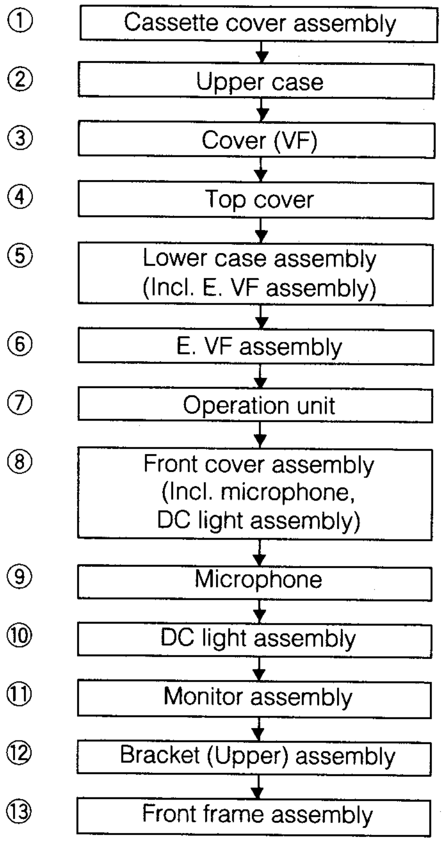
17. Soldering kit
Thin head is made so that it can be inserted into small spaces.

18. Cleaning cloth
Recommended cleaning cloth to wipe down the video heads, mechanism (tape transport system), optical lens surface.

1.3 DISASSEMBLY/ASSEMBLY OF CABINET PARTS

1.3.1 Disassembly flow chart

This flowchart indicates the disassembly step for the cabinet parts and board assembly in order to gain access to item(s) to be serviced. When reassembling, perform the step(s) in reverse order. Bend, route and dress the flat cables as they were originally.


① Cassette cover assembly
② Upper case
③ Cover (VF)
④ Top cover
⑤ Lower case assembly (Incl. E. VF assembly)
⑥ E. VF assembly
⑦ Operation unit
⑧ Front cover assembly (Incl. microphone, DC light assembly)
⑨ Microphone
⑩ DC light assembly
⑪ Monitor assembly
⑫ Bracket (Upper) assembly
⑬ Front frame assembly

1.3.2 Disassembly method

STEP /LOC NO.	PART	Fig. No.	REMOVAL	
			*UNLOCK/RELEASE/ UNPLUG/UNCLAMP/ UNSOLDER	Note
①	CASSETTE COVER ASSEMBLY	C1	2(S1)	-
②	UPPER CASE	C2	2(S2a), (S2b),(L2a), (L2b) (L2c)	<NOTE 1>
③	COVER (VF)	C3	2(S3), (L3)	-
④	TOP COVER	C4	2(S4),2(L4a), 2(L4b), 2(L4c)	<NOTE 2>
⑤	LOWER CASE ASSEMBLY (INCL. E.VF ASSEMBLY)	C5	9(S5a), 3(S5b), (L5a), (L5b) (L5c),(L5d),(L5e) *CONNECTOR Ⓐ, Ⓑ CAP (RCA JACK) CAP (REAR JACK)	<NOTE 3> <NOTE 4>
⑥	E. VF ASSEMBLY	C6	2(S6)	-
⑦	OPERATION UNIT	C7	2(S7), (L7a), (L7b), (L7c) *CONNECTOR Ⓒ, Ⓓ	<NOTE 4>
⑧	FRONT COVER ASSEMBLY (INCL. MIC DC LIGHT ASSEMBLY)	C8	(S8a), (S8b), (L8a), (L8b) *CONNECTOR Ⓔ	<NOTE 4>
⑨	MICROPHONE		(S8b)	-
⑩	DC LIGHT ASSEMBLY		2(L8c)	-
⑪	MONITOR ASSEMBLY	C9	4(S9) *CONNECTOR Ⓕ	<NOTE 4>
		C10	2(S10a), 4(S10b), (L10a) (L10b),(L10c), (L10d), (L10e)	<NOTE 5>
		C11	2(L11a), (L11b) *CONNECTOR Ⓖ, Ⓗ, Ⓙ	<NOTE 4> <NOTE 6>
		C12	3(S12a), (S12b), 2(L12a)	<NOTE 7> <NOTE 8> <NOTE 9>
⑫	BRACKET (UPPER) ASSEMBLY	C13	3(S13)	-
⑬	FRONT FRAME ASSEMBLY	C14	2(S14)	-

List of Abbreviations:
2(S1)=2 screws (S1)
4(L1a)=4 Locking Tabs (L1a)

Reference Notes:

<NOTE 1>
Pay heed to the FPC wire not to damage it.

<NOTE 2>
Pay heed to the FPC wire under the top cover not to get it broken.

<NOTE 3>
When removing the LOWER CASE assembly, pay careful attention to the knob of the switch (DC LIGHT) to get it neither damaged nor lost.

<NOTE 4>
Destination of connectors

Note: ***Three kinds of double-arrows in connection tables respectively show kinds of connector/wires.***

⟷ : Board to Board connector
⇔ : Flat wire
↔ : Wire

Con-nector	No. of Pins	Connector
Ⓐ	2	LITHIUM ↔ MAIN CN26
Ⓑ	5	E. VF (B/W) ↔ MAIN CN12
Ⓒ	10	OPERATION UNIT ⇔ MAIN CN13
Ⓓ	2	SPEAKER ↔ MAIN CN27
Ⓔ	2	MIC ↔ MAIN CN8
Ⓕ	27	MONITOR ASSEMBLY ⇔ MAIN CN16
Ⓖ	24	MONITOR CN7502 ⇔ LCD MODULE
Ⓗ	2	MONITOR CN7503 ↔ BACK LIGHT
Ⓙ	24	MONITOR CN7501 ⇔ T. HINGE

<NOTE 5>
For removing the cover, first turn the hinge at an angle of 90° as shown in the figure and then remove the cover.

<NOTE 6>
Tuck up the (*3") model LCD FPC as shown in the above figure.
* : Only for GR-SXM46

<NOTE 7, 8>
(1) The FPC assembly should be winded around the hinge assembly by two and half turns so that the wire to be connected to the mnonitor board assembly is positioned inside.
(2) The upper and lower hinge covers should be mounted so carefully the any wire is not caught into either of the covers.

<NOTE 9>
When reassembling, take care of wire arrangement.

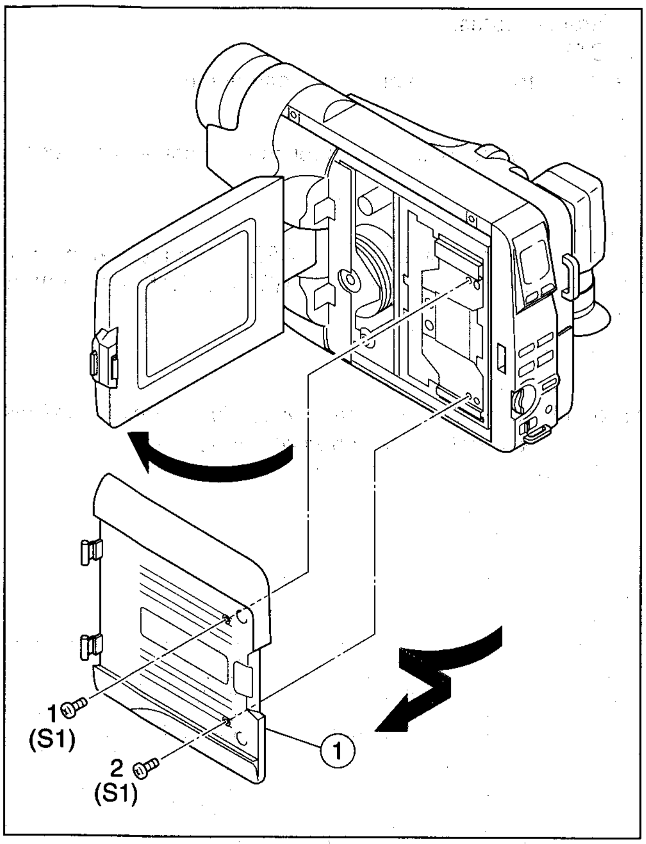


Fig. C1

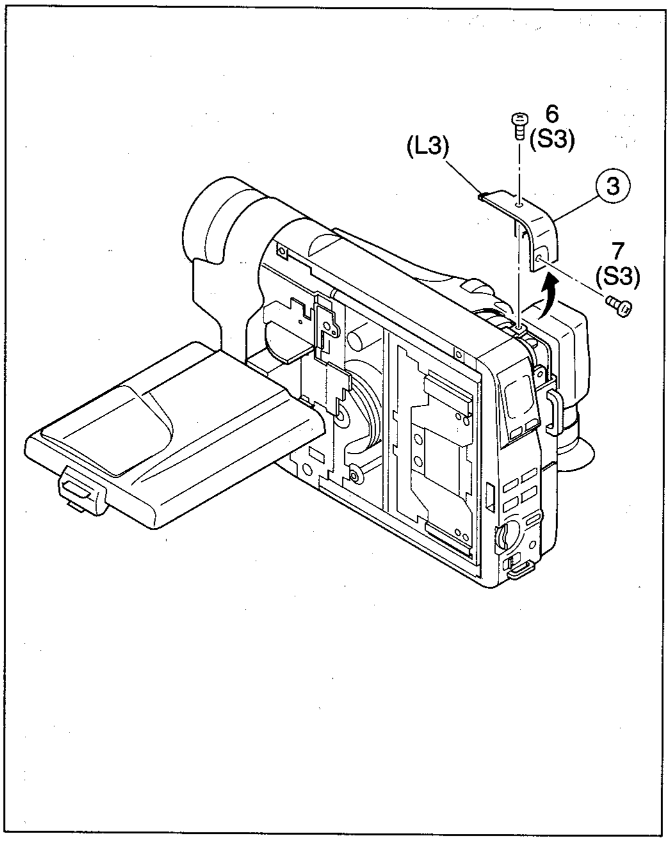


Fig. C3

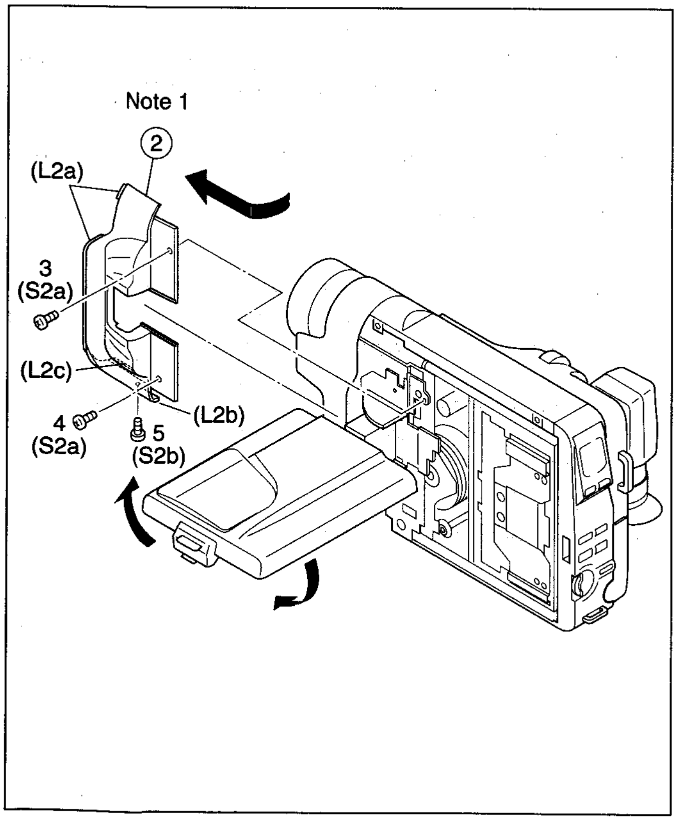

Note 1
②
(L2a)
3
(S2a)
(L2c)
4
(S2a)
5
(S2b)
(L2b)

Fig. C2

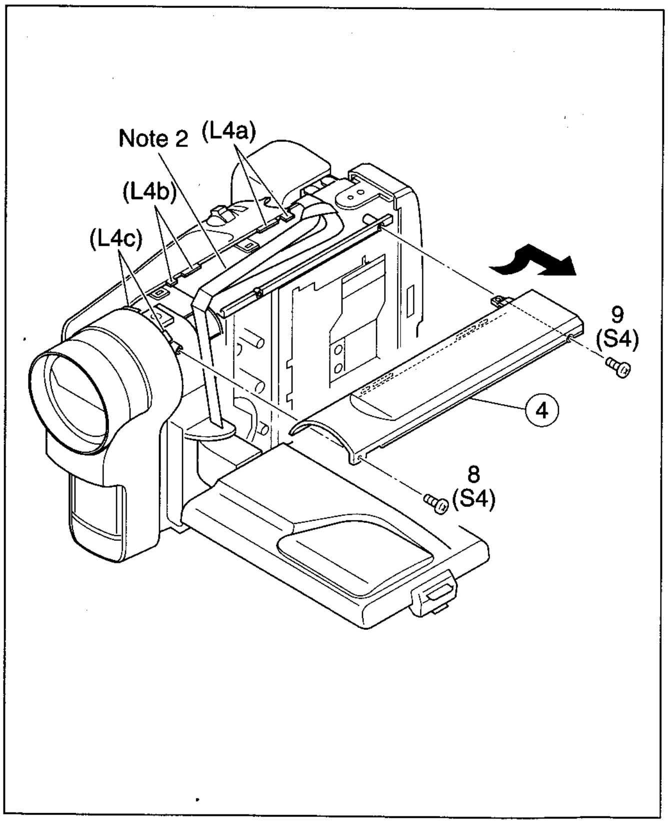

Note 2
(L4a)
(L4b)
(L4c)
9
(S4)
④
8
(S4)

Fig. C4

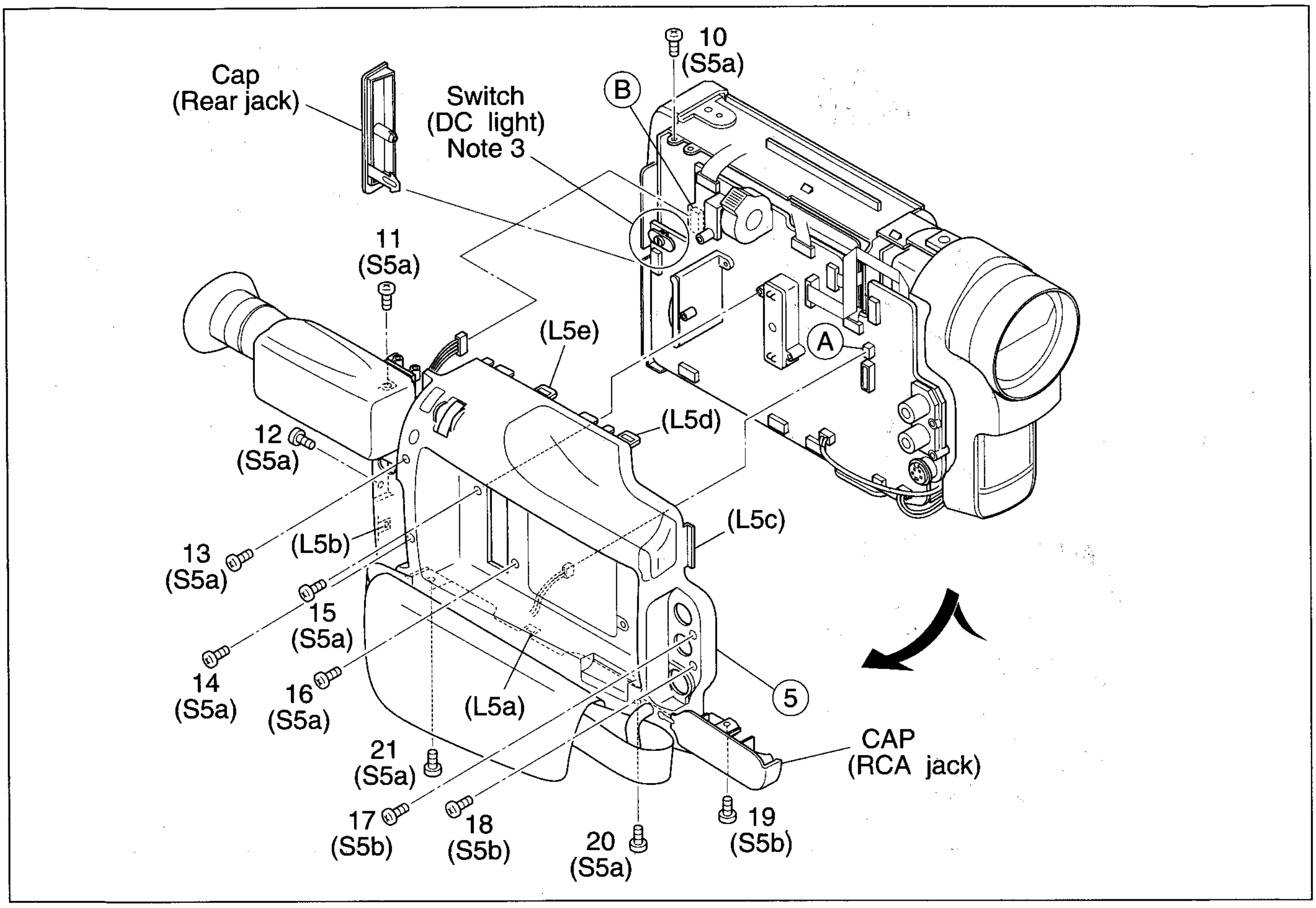

10
(S5a)
Cap
(Rear jack)
Switch
(DC light)
Note 3
B
11
(S5a)
(L5e)
A
(L5d)
12
(S5a)
(L5b)
(L5c)
13
(S5a)
15
(S5a)
14
(S5a)
16
(S5a)
(L5a)
5
CAP
(RCA jack)
21
(S5a)
17
(S5b)
18
(S5b)
20
(S5a)
19
(S5b)

Fig. C5

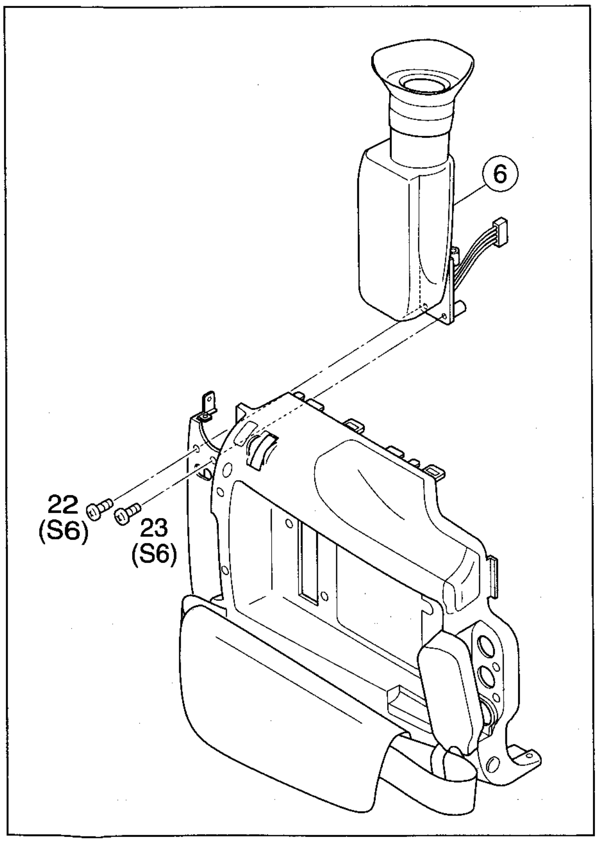


Fig. C6

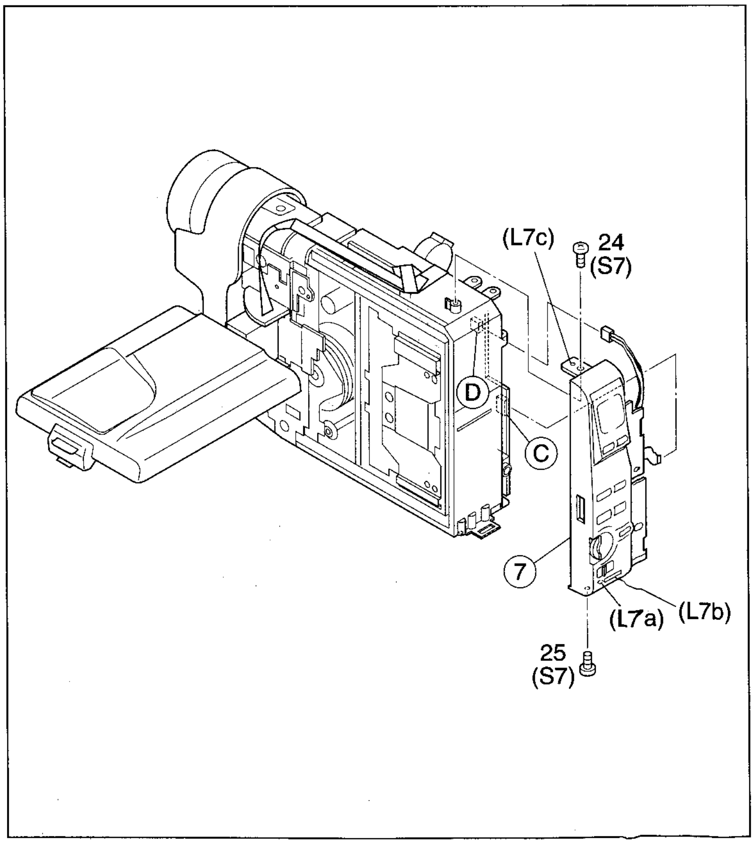

(L7c)
24
(S7)
D
C
7
(L7a)
(L7b)
25
(S7)

Fig. C7

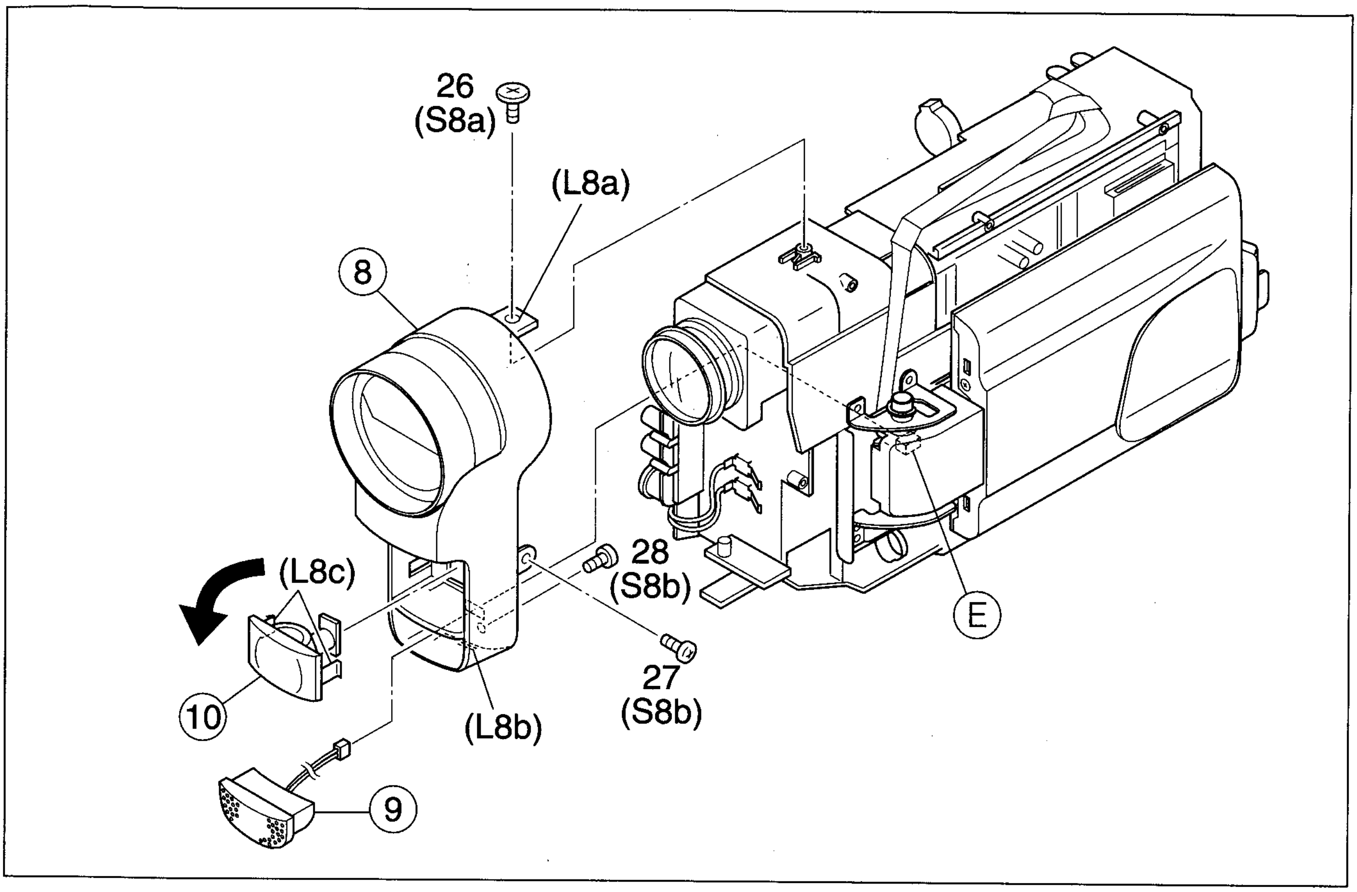

26
(S8a)
(L8a)
8
28
(S8b)
(L8c)
E
27
(S8b)
10
(L8b)
9

Fig. C8

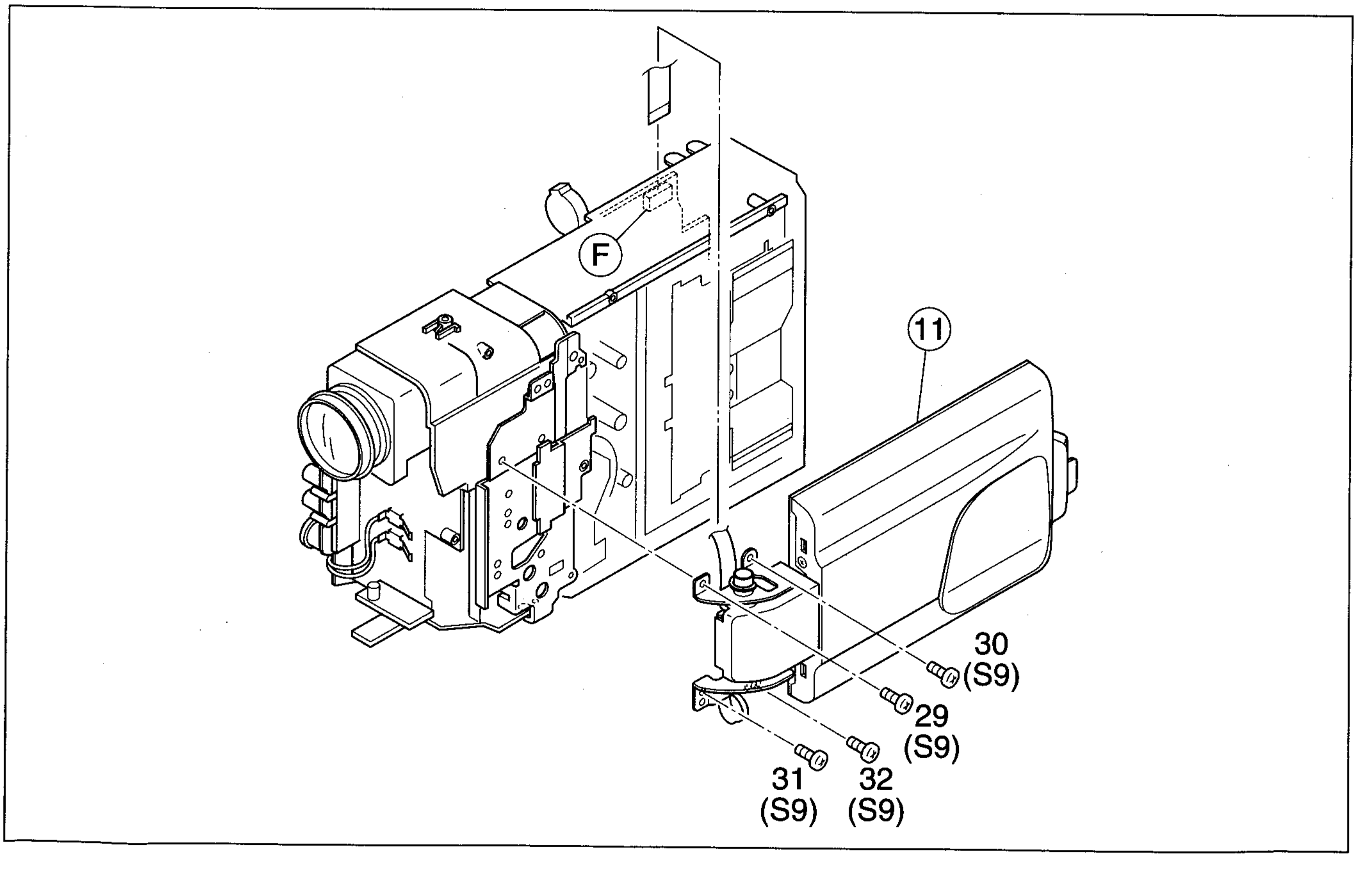
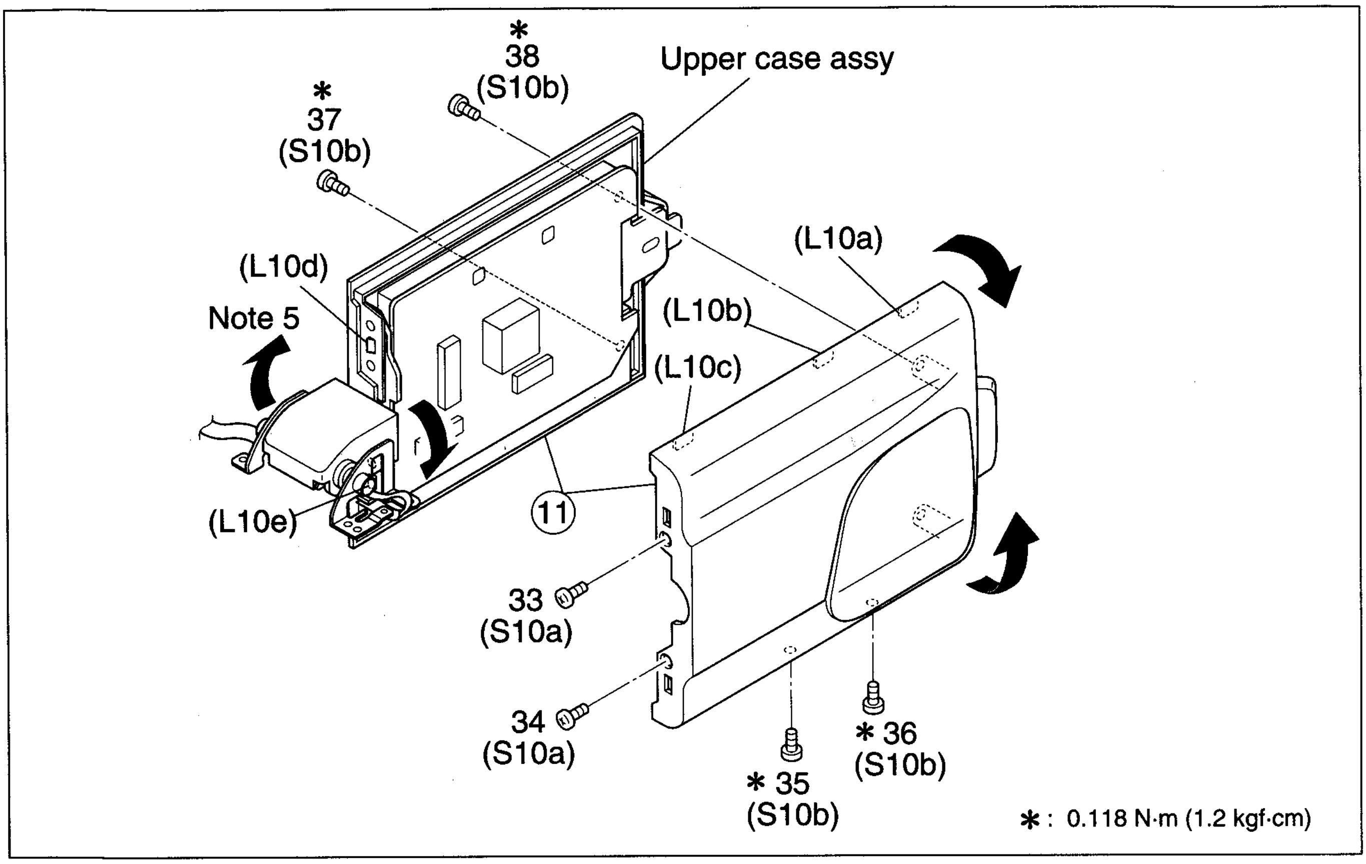
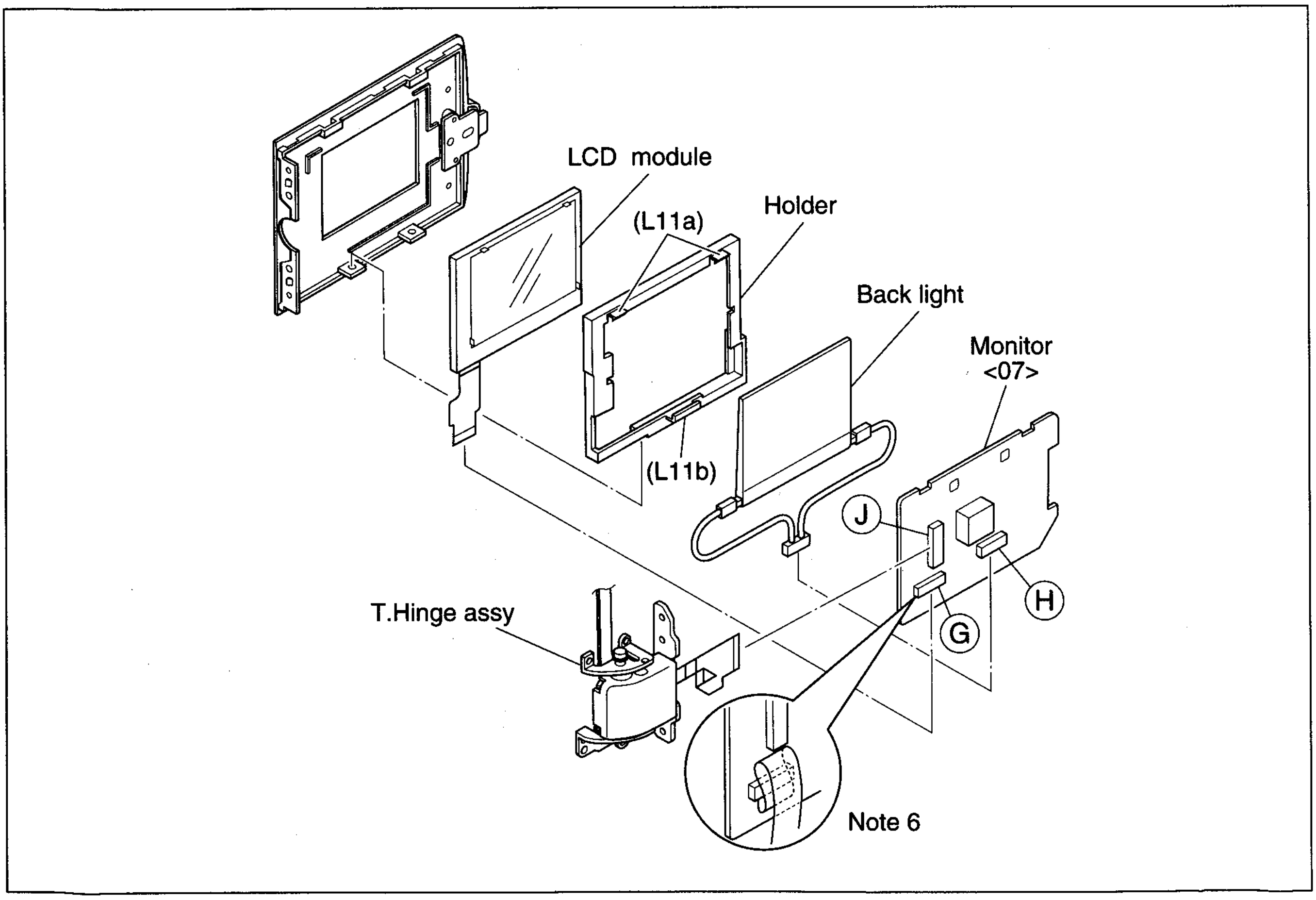

F
11
30
(S9)
29
(S9)
31
(S9)
32
(S9)

Fig. C9



* 38 (S10b)
Upper case assy
* 37 (S10b)
(L10a)
(L10d)
Note 5
(L10b)
(L10c)
(L10e)
11
33 (S10a)
34 (S10a)
* 36 (S10b)
* 35 (S10b)
* : 0.118 N·m (1.2 kgf·cm)

Fig. C10



LCD module
(L11a)
Holder
Back light
Monitor <07>
(L11b)
J
H
G
T.Hinge assy
Note 6

Fig. C11

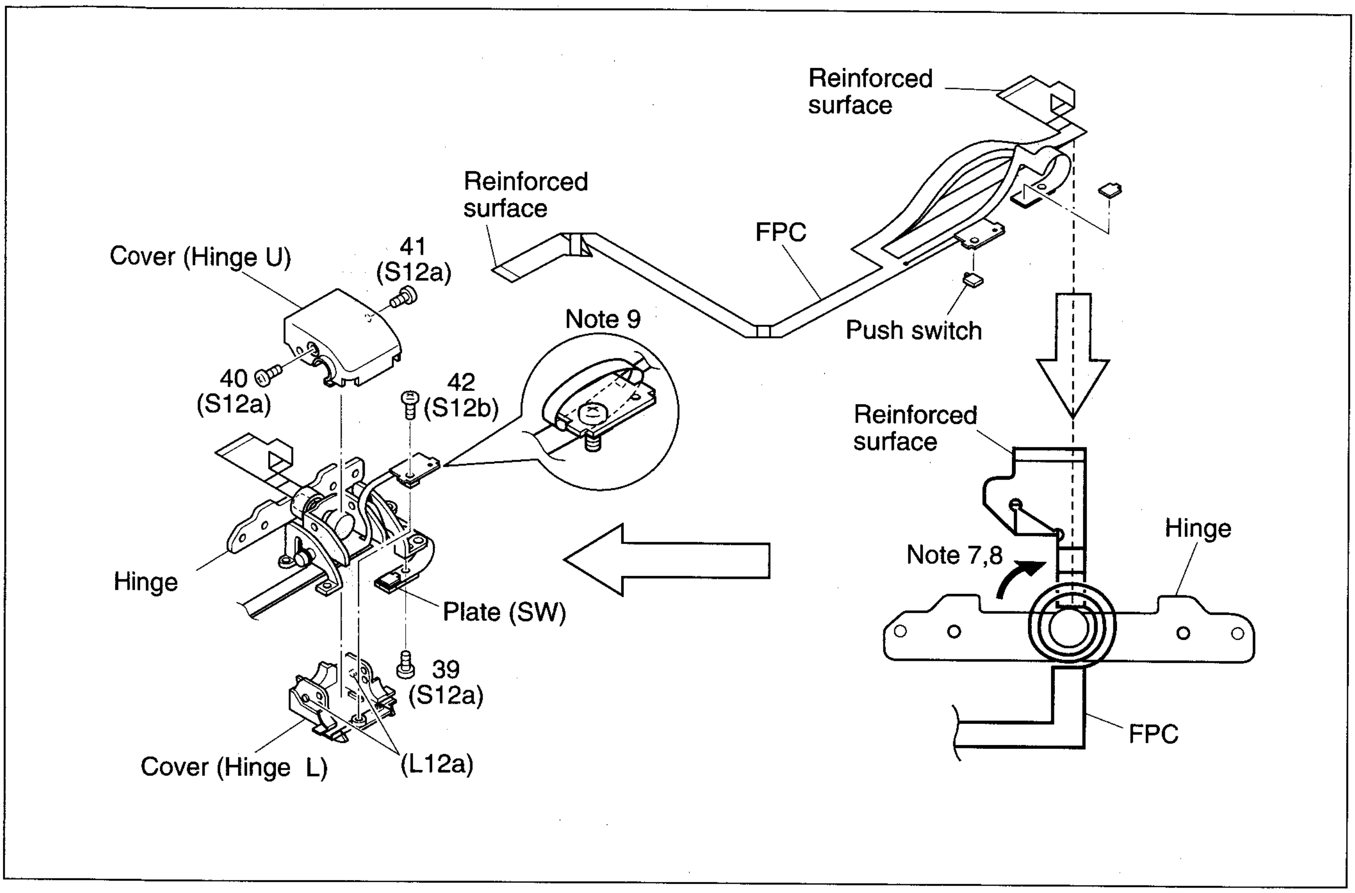

Reinforced surface
Reinforced surface
FPC
Cover (Hinge U)
41 (S12a)
Note 9
Push switch
40 (S12a)
42 (S12b)
Reinforced surface
Hinge
Note 7,8
Hinge
Plate (SW)
39 (S12a)
FPC
Cover (Hinge L)
(L12a)

Fig. C12

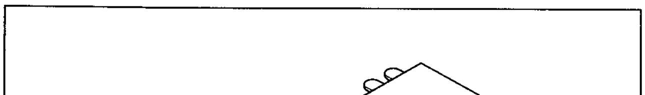
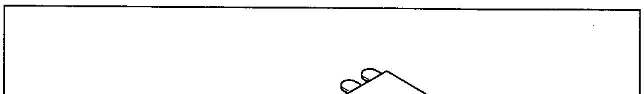

43 (S13)
12
44 (S13)
45 (S13)

Fig. C13


*46 (S14)
13
*47 (S14)

*: 0.098 N·m (1.0 kgf·cm)

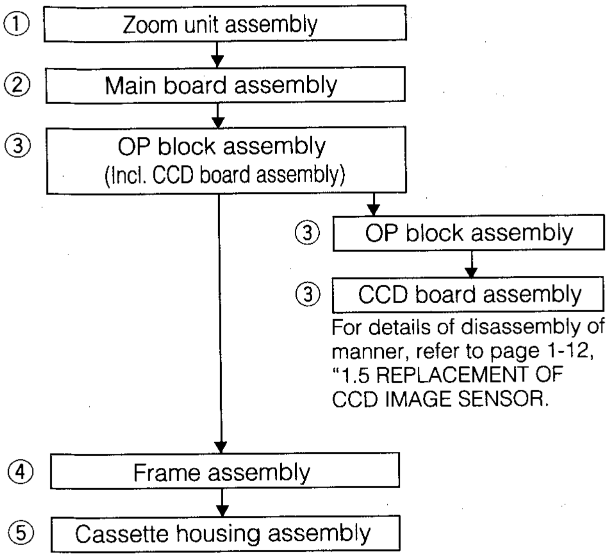
Fig. C14

1.4 DISASSEMBLY/ASSEMBLY OF CAMERA SECTION AND DECK SECTION

1.4.1 Flowchart of disassembly

The following flowchart shows the disassembly of the camera section and deck section. When assembly of the camera section and deck section, follow this flowchart in the reverse order.

<Camera section/Deck section>


① Zoom unit assembly
② Main board assembly
③ OP block assembly (Incl. CCD board assembly)
③ OP block assembly
③ CCD board assembly
④ Frame assembly
⑤ Cassette housing assembly

For details of disassembly of manner, refer to page 1-12, "1.5 REPLACEMENT OF CCD IMAGE SENSOR.

1.4.2 Disassembly method

STEP /LOC NO.	PART	Fig. No.	REMOVAL	
			*UNLOCK/RELEASE/ UNPLUG/UNCLAMP/ UNSOLDER	Note
①	ZOOM UNIT ASSEMBLY	D1	3(S1) *CONNECTOR Ⓚ	<NOTE 1>
②	MAIN BOARD ASSEMBLY	D2	2(S2a), (S2b) *CONNECTOR Ⓛ,Ⓜ,Ⓝ,Ⓞ Ⓟ,Ⓠ,Ⓡ,Ⓢ,Ⓣ	<NOTE 1>
③	OP BLOCK ASSEMBLY	D3	2(S3) CUSHION (OP)	-
④	FRAME ASSEMBLY	D4	2(S4a), (S4b)	-
⑤	CASSETTE HOUSING ASSEMBLY	D5	4(S5)	-

List of Abbreviations:
3(S1) = 3 Screws (S1)

Reference Notes:
<NOTE 1>
Destination of connectors

Note: *Three kinds of double-arrows in connection tables respectively show kinds of connector/wires.*

⟷ : Board to Board connector
⇔ : Flat wire
↔ : Wire

Con-nector	No. of Pins	Connector		
Ⓚ	14	MAIN CN18	⇔	ZOOM UNIT
Ⓛ	2	MAIN CN4	↔	LOADING MOTOR
Ⓜ	10	MAIN CN1	⇔	DRUM MOTOR
Ⓝ	11	MAIN CN5	⇔	VIDEO/FLY. E HEAD
Ⓞ	14	MAIN CN2	⇔	SENSOR
Ⓟ	22	MAIN CN15	⇔	OP BLOCK
Ⓠ	14	MAIN CN22	⇔	CCD
Ⓡ	11	MAIN CN7	⇔	A/C HEAD
Ⓢ	18	MAIN CN3	⇔	CAPSTAN MOTOR
Ⓣ	2	MAIN CN14	↔	DC LIGHT

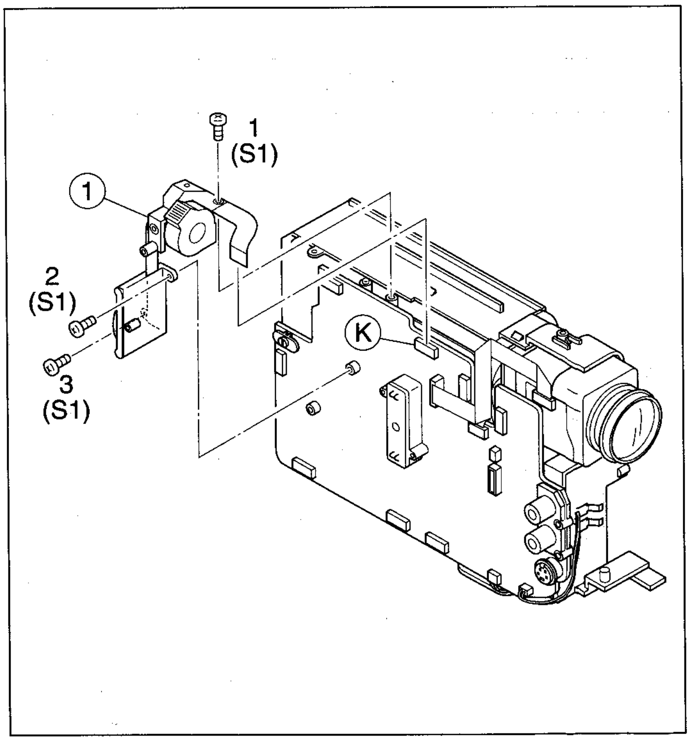
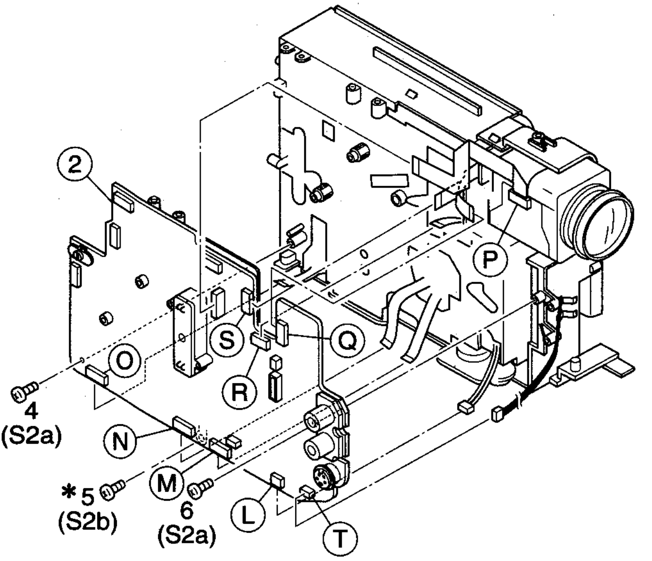
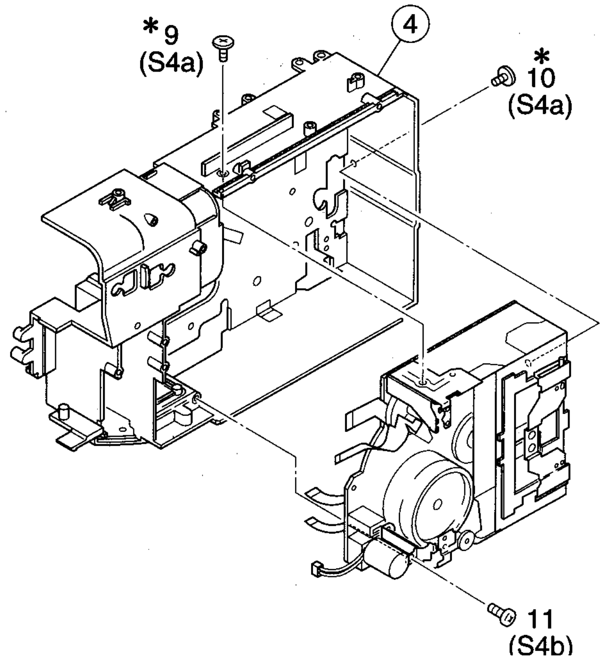

1
(S1)
①
2
(S1)
3
(S1)
K

Fig. D1


②
Ⓟ
Ⓢ
Ⓠ
Ⓞ
Ⓡ
4
(S2a)
Ⓝ
*5
(S2b)
Ⓜ
6
(S2a)
Ⓛ
Ⓣ

✱ : 0.108 N·m (1.1 kgf·cm)

Fig. D2


*9
(S4a)
④
*
10
(S4a)
11
(S4b)

✱ : 0.108 N·m (1.1 kgf·cm)

Fig. D4

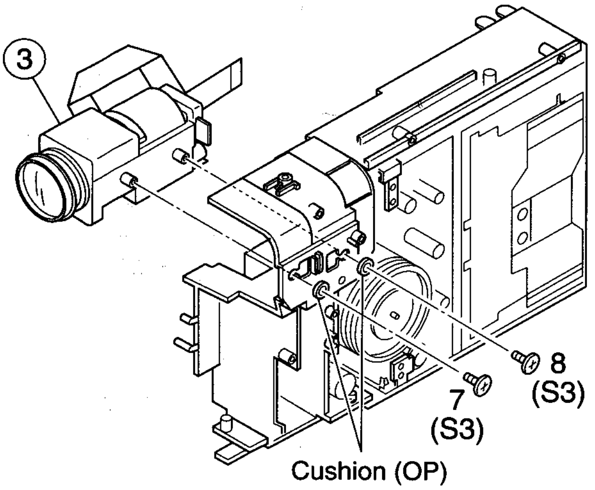

③
8
(S3)
7
(S3)
Cushion (OP)

Fig. D3

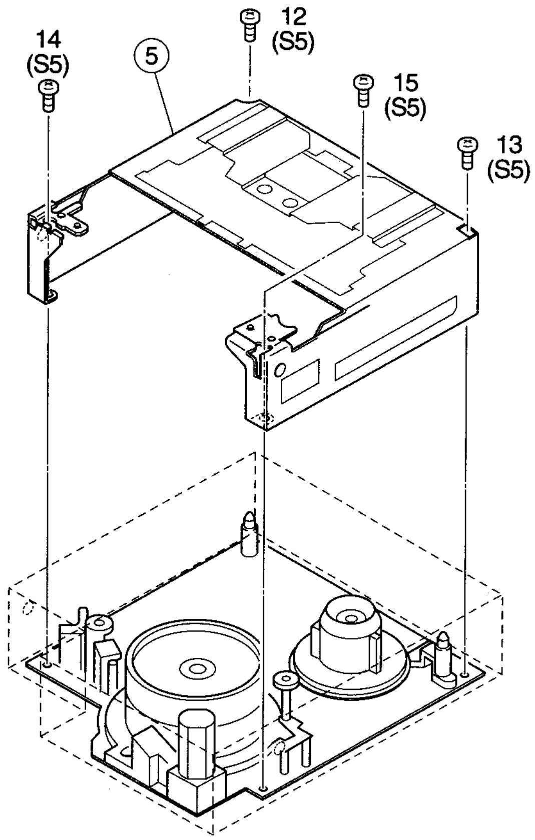

14
(S5)
⑤
12
(S5)
15
(S5)
13
(S5)

Fig. D5

1.5 REPLACEMENT OF CCD IMAGE SENSOR

Notes:

- *Pay the most careful attention to the transparent glass and optical LPF of the CCD image sensor so a not the soil and damage them. If something is soiled with finger-prints, etc., gently clean it with silicon-processed paper/cloth or chamois.*
- *When the CCD image sensor is shipped from the factory, there are protection seals applied onto the transparent glass. Leave the protector as it is, and take it off just before assembling the CCD image sensor to the OP block.*

1.5.1 Removal of CCD image sensor

1. Remove two screws (1, 2) securing the CCD base assy, and disassemble the CCD spacer, the optical LPF, spacer rubber.

1.5.2 Installation of new CCD image sensor

1. Remove the protection seal from a new CCD image sensor. Next, put the optical LPF, spacer rubber, CCD spacer on the CCD image sensor as they are piled up in this order. At that time, make sure of orientation of each item refering to the following table (see Fig. 1-5-1).

Part Name	Orientation
CCD image sensor	Mark is on the right viewed as indicated by the arrow ⓐ.
Spacer rubber	IC side is horizontal.
Optical LPF	Marks are on the left and bottom viewed as indicated by the arrow ⓐ.

2. Fix the CCD base assy to OP block with the two screws (1, 2). At that time, be careful of the orientation.
3. After completion of all P.C. boards to the camera section, observe the monitor to confirm no vignetting caused by the bodytube, rings, lens hood, etc. If no vignetting is observed, it can be said that image's parallel, horizontality and centering are correct.

1.5.3 Replacement of CCD board assy

1. Remove one screw (3).
2. Unsolder at the fourteen points on the CCD board assy.

Note: *1. Remove the screw (3) only when the CCD board assy needs replacement.*
2. When installing a new CCD board assy, carry out the above-mentioned procedure in the reverse order.

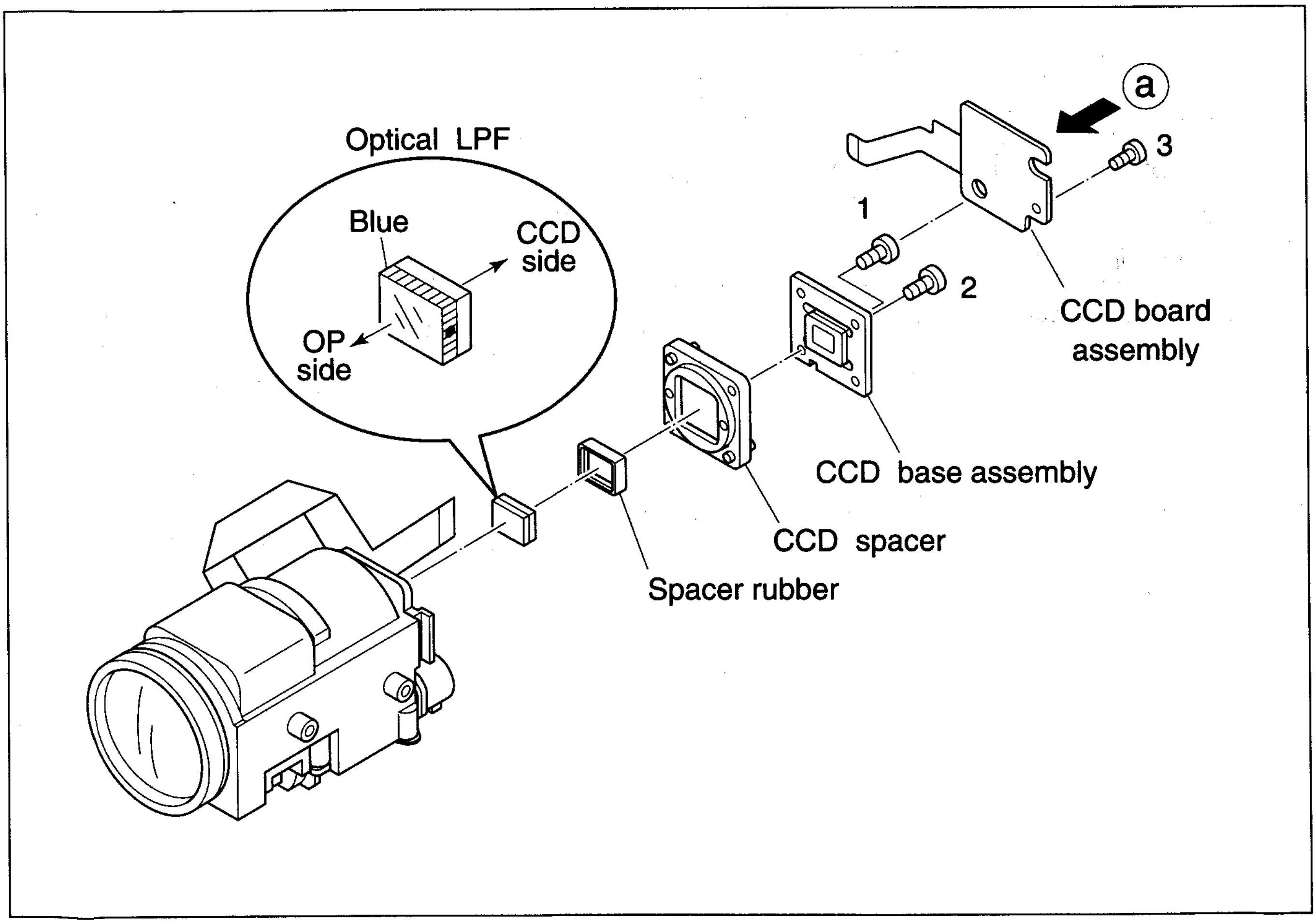


Fig. 1-5-1

1.6 TAKE OUT CASSETTE TAPE

In the event that the set enters the emergency mode as it is loaded with a cassette tape and the cassette tape cannot be ejected with the EJECT button, manually, take it out of the set according to the following procedure.

Note: ***If the mechanism comes into the unloading mode as the cassette tape is not held by hand, it results in tape damage.***

1. Disconnect the set from the power source.
2. Remove the cassette cover assembly, Cover (VF), top cover, (See Fig. C1, C2 and C3, Page 1-1, 2, 3 and 4)
3. Connect a jumper wire to each pole of the loading motor as shown by the magnified view ⓑ (Fig. 1-6-1)
4. While holding down the cassette housing by hand, connect the jumper wires to a battery to run the mechanism to the EJECT position four unloading. If this unloading operation is performed as the cassette housing is not held down by hand, the front lid of the cassette may damage the tape when it is ejected.
5. For taking in the slack of the tape, run the mechanism to the EJECT position as the front lid of the cassette is left open, and turn the take-up gear in the forward direction to wind up the tape. After confirming that the tape has completely been wound up and the supply reel is idling, take the cassette tape out of the cassette housing.

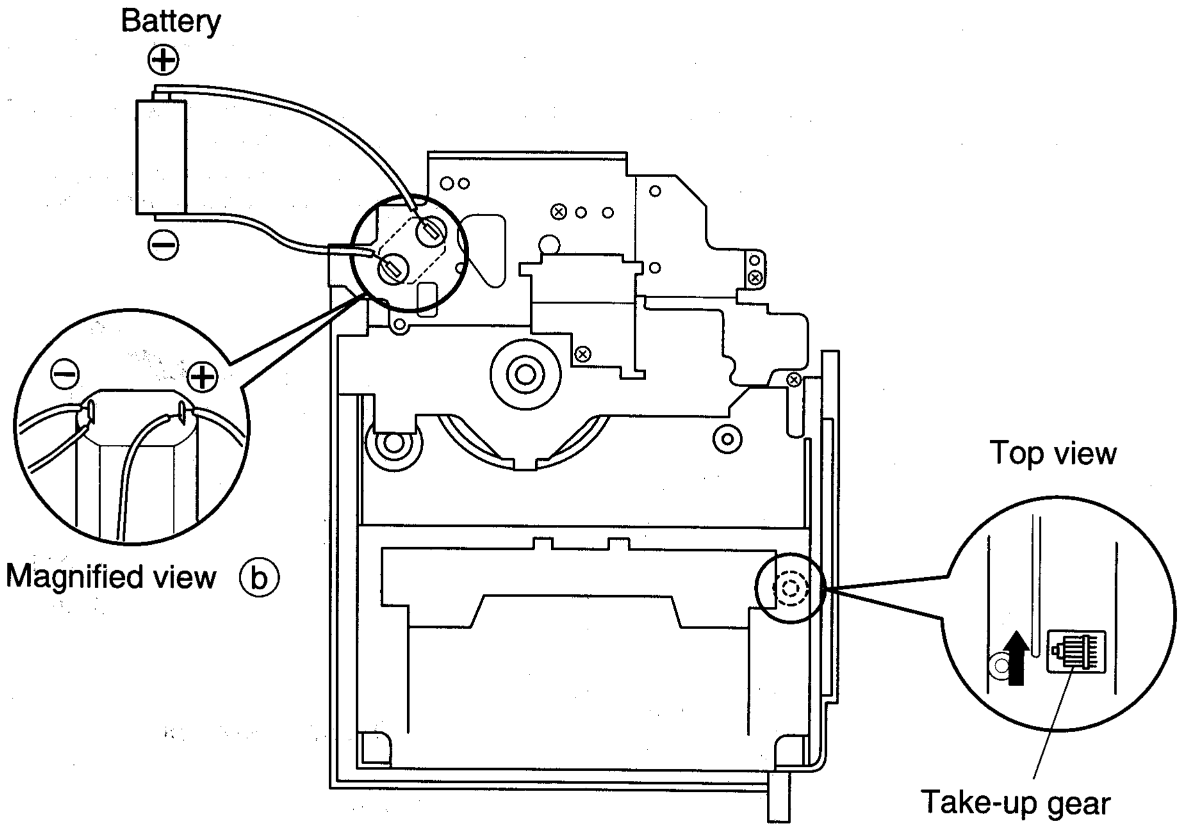


Fig. 1-6-1

1.7 EXTENSION CABLE CONNECTION

Connector	Connection			Pins	Parts Number
①	MAIN CN15	⟷	OP BLOCK	22	YTU94074-22 YTU94077-22
②	MAIN CN22	⟷	CCD	14	YTU94074-14 YTU94077-14
③	MAIN CN7	⟷	A/C HEAD	11	YTU94074-11 YTU94077-11
④	MAIN CN3	⟷	CAPSTAN MOTOR	18	YTU94074-18 YTU94077-18
⑤	MAIN CN2	⟷	SENSOR	14	YTU94074-14 YTU94077-14
⑥	MAIN CN5	⟷	VIDEO/FLY. E HEAD	11	YTU94074-11 YTU94077-11
⑦	MAIN CN1	⟷	DRUM MOTOR	10	YTU94074-10 YTU94077-10
⑧	MAIN CN4	⟷	LOADING MOTOR	2	YUJ40095A-2
⑨	MAIN CN12	⟷	B/W VF	5	YUJ40095A-5
⑩	MAIN CN13	⟷	OPERATION UNIT	10	YTU94074-10 YTU94077-10
⑪	MAIN CN18	⟷	ZOOM UNIT	14	YTU94074-14 YTU94077-14

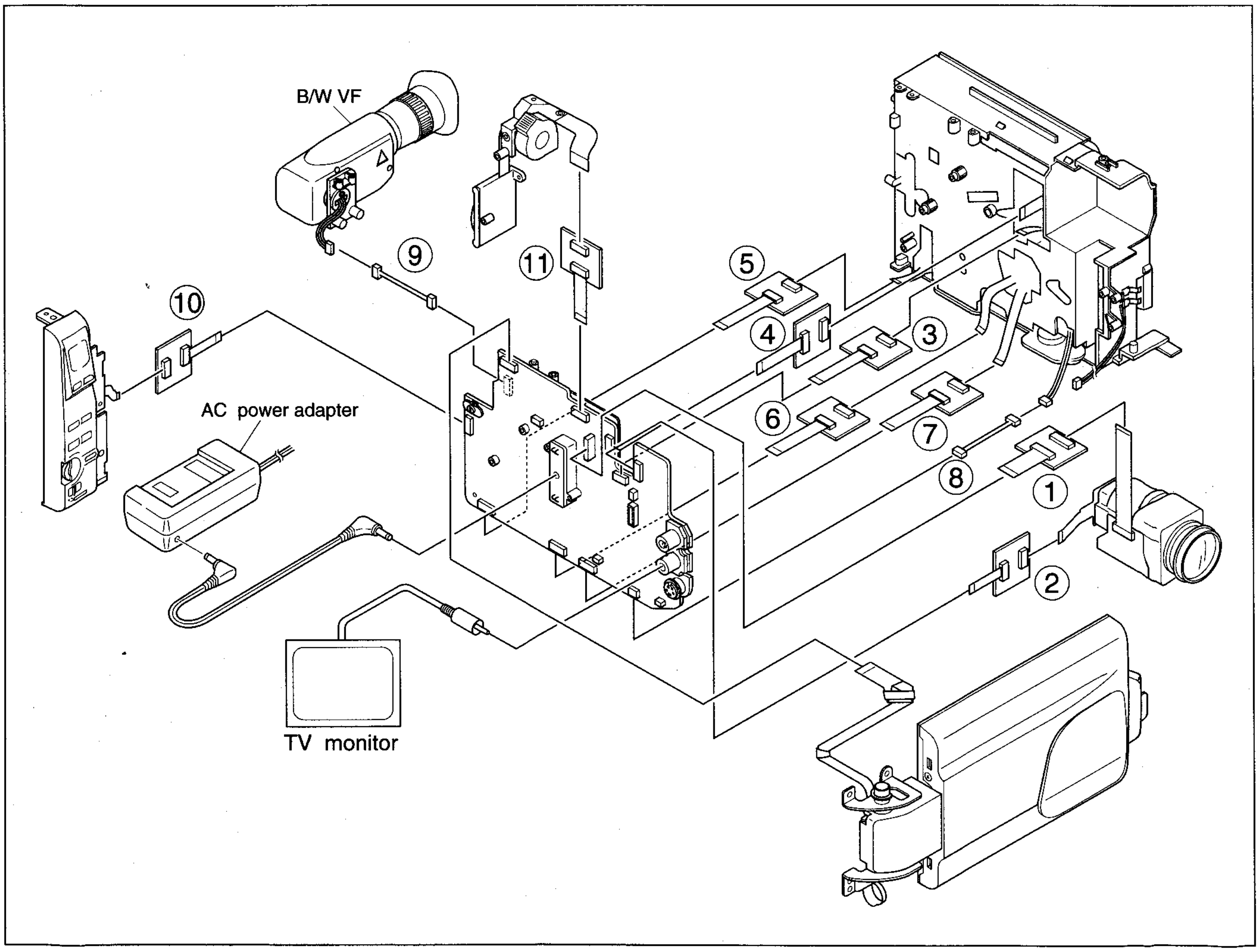


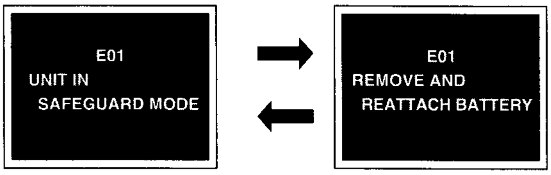
Fig. 1-7-1

1.8 EMERGENCY DISPLAY

Whenever some abnormal signal is input to the mechacon CPU, an error number (E01, as an example) is displayed in the electronic view finder.
In every error status, such the message as shown below alternately appear over and over.

- In an emergency mode, all operations except turning on/off the POWER switch are ineffectual.

Example (in case of the error number E01):



```
E01
UNIT IN
SAFEGUARD MODE
```

```
E01
REMOVE AND
REATTACH BATTERY
```

E. VF	Symptom	Mode when observed	Resulting mode
E07	Short circuit of capstan MDA	Power ON	Power OFF
E06	CAPSTAN FG input absent	EDIT	Power OFF
E04	DRUM FF input absent	DRUM rotation	Power OFF
E03	SUPPLY REEL FG input absent	REC, PLAY, SEARCH, FF	UNLOADING →Power OFF
E02	Mode control motor rotates for more than 10 sec without shift to next mode.	UNLOADING	Power OFF
E01	Mode control motor rotates for more than 10 sec without shift to next mode.	LOADING	Power OFF
E00	Overtime the programming transaction	REC, PLAY	Power OFF

1.9 DEMONSTRATION MODE

This model has the DEMONSTRATION mode.

1) How to set the DEMONSTRATION mode.
The camera can be entered into the DEMONSTRATION mode by setting on the DISPLAY screen appearing in the viewfinder.

When entering the camera into the DEMONSTRATION mode, pay heed to the following matters.

No cassette is set in the camcorder or a cassette is set in the camcorder but it is protected from recording.

Note 1) *The indications of the DISPLAY page very depending on the setting.*

2) How to cancel the DEMONSTRATION mode.
To cancel the DEMONSTRATION mode, turn the POWER switch off ("POWER OFF").

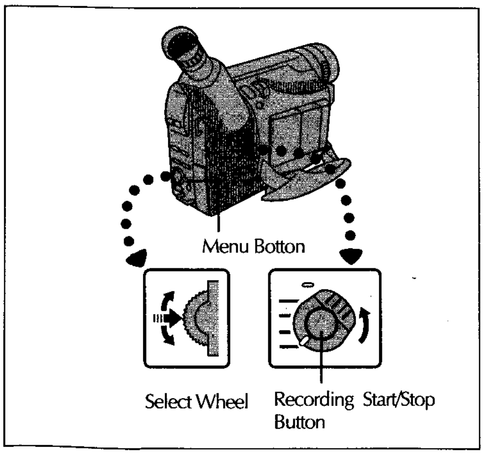
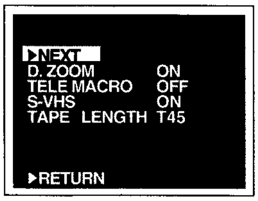


Fig. 1-10-1

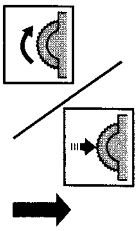
1. Set the POWER switch to turn on the "PRO".
   Press the MENU BUTTON once.
   The first page of the DISPLAY appears on the LCD monitor (or in the viewfinder).



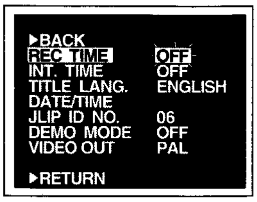
```
▶NEXT
D. ZOOM       ON
TELE MACRO    OFF
S-VHS         ON
TAPE  LENGTH  T45

▶RETURN
```

Display 1



2. Turn the SELECT WHEEL in the direction of the arrow to set the cursor at "NEXT".
   Press the SELECT WHEEL once.
   The second page of the DISPLAY appears on the LCD monitor (or in the viewfinder).



```
▶BACK
REC  TIME     OFF
INT.  TIME    OFF
TITLE  LANG.  ENGLISH
DATE/TIME
JLIP  ID  NO. 06
DEMO  MODE    OFF
VIDEO OUT     PAL

▶RETURN
```

Display 2

See to next page

Note 2) *As the "DEMO MODE" is executed, the camcoder enters the DEMONSTRATION mode after the title screen of "JVC', "TITLE CALL" and "FUTURE" appear in this order.*

<Flow chart>

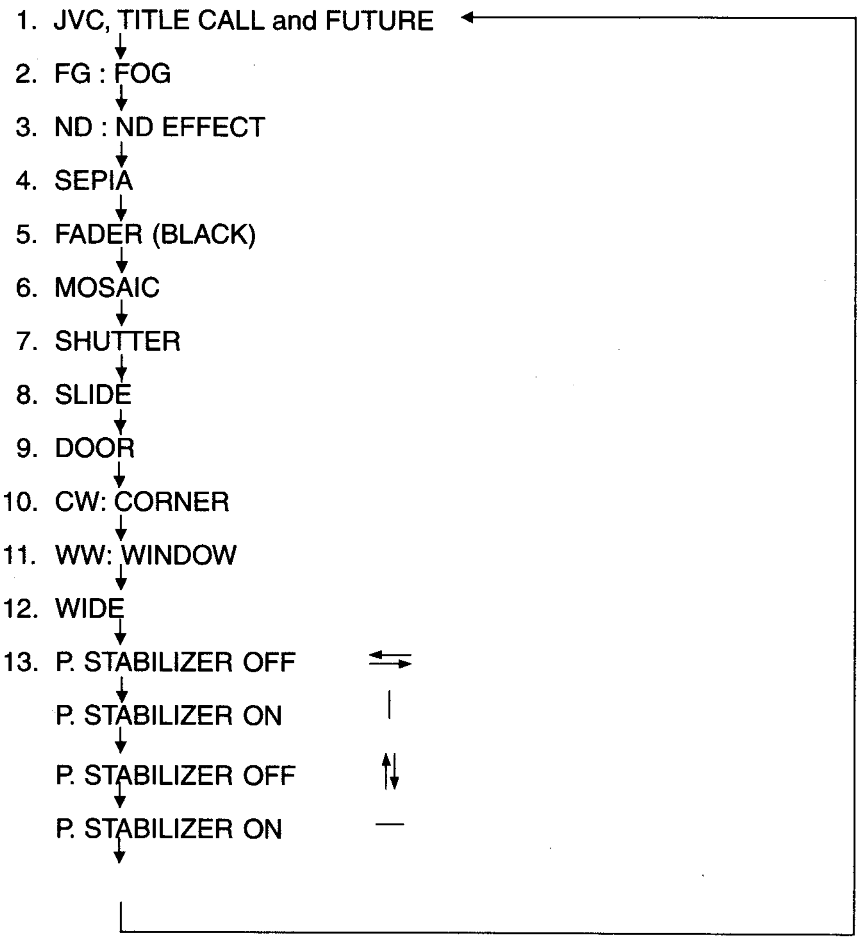
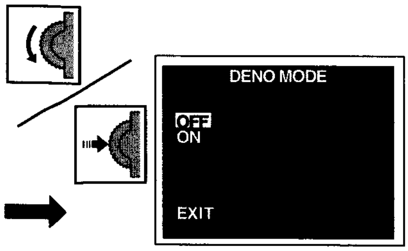

1. JVC, TITLE CALL and FUTURE
2. FG : FOG
3. ND : ND EFFECT
4. SEPIA
5. FADER (BLACK)
6. MOSAIC
7. SHUTTER
8. SLIDE
9. DOOR
10. CW: CORNER
11. WW: WINDOW
12. WIDE
13. P. STABILIZER OFF
P. STABILIZER ON
P. STABILIZER OFF
P. STABILIZER ON

Fig. 1-9-2

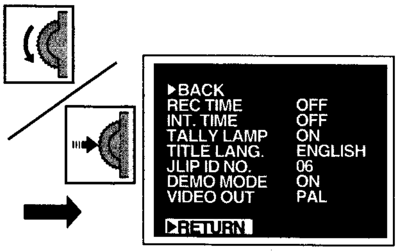
3. Turn the SELECT WHEEL in the direction of the arrow to set the cursor at "DEMO MODE". Then, press the SELECT WHEEL once. The third page of the DEMO MODE appears on the LCD monitor (or in the viewfinder).

4. Turn the SELECT WHEEL in the direction of the arrow to set the cursor at "ON". Then, press the SELECT WHEEL once. The fourth page of the DISPLAY appears on the LCD monitor (or in the viewfinder). ("DEMO MODE" is switched "ON" from "OFF" status.)

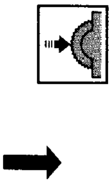
5. Press the SELECT WHEEL once. The camcorder automatically enters the DEMONSTRATION mode and it repeats demonstration operation. While the camcorder is performing demonstration, all operations except turning on/off the POWER switch are ineffectual.


DENO MODE
OFF
ON
EXIT

Display 3


▶BACK
REC TIME OFF
INT. TIME OFF
TALLY LAMP ON
TITLE LANG. ENGLISH
JLIP ID NO. 06
DEMO MODE ON
VIDEO OUT PAL
▶RETURN

Display 4



Refer to Fig. 1-9-2.
While the DEMONSTRATION mode is activated, a word of "DEMONSTRATION" is appearing on the screen scrolling from right to left.

SECTION 2
MECHANISM ADJUSTMENT

YMA0028A is used in this model.

For the MECHANISM ADJUSTMENT, please refer to the MECHANISM ASSEMBLY of the Service Manual (No. 86532).

2.1 Required adjustment tools

- Prepare the following for adjustment.

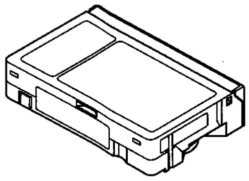
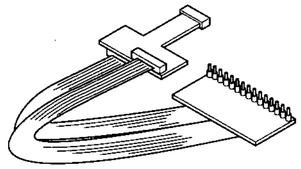
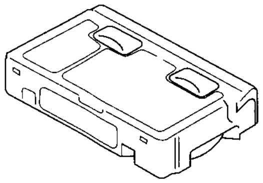
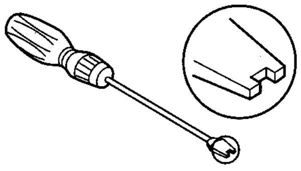
Alignment tape for interchangeability MHPE-C: SP	Jig connector cable YTU93082E
	
Cassette torque meter PUJ50431-2	Roller Driver PTU94002-2
	

Table 2-1-1

SECTION 3
ELECTRICAL ADJUSTMENT

3.1 ELECTRICAL ADJUSTMENT

3.1.1 PREPARATION

1. Precaution

This model does not contain adjustment controls (VR). General deck system, camera system and monitor system adjustment are not required. However, if MAIN board and MONITOR board need replacement, please use original E^{2}PROM on to new board. Then adjustment are not required. And if parts such as the following need replacement, special computerized adjustment are required (Refer to sec. 3.1.1-4). Please contact to JVC Service for detaile information.

- OP block
- E^{2}PROM (IC104 of MAIN board)
- MONITOR
- E^{2}PROM (IC7602 of MONITOR board)

In the event of malfunction with electrical circuits, trouble-shooting with the aid of proper test instruments most be done first, and then commence necessary repair, replacement and adjustment, etc.

1. In case of wiring to chip test points for measurement, use IC clips, etc. to avoid any stress.
2. Since connectors are fragile, carefully handle them in disconnecting and connecting.
3. Shortcircuit between operation un it and DECK chassis.

2. Required test equipment

1. Color TV monitor.
2. AC power adapter
3. Oscilloscope (dual-trace type, observable 100 MHz or higher frequency)
   * It is recommended to use one observable 300 MHz or higher frequency.
4. Digital voltmeter
5. Frequency counter (with threshold level adjuster)
6. Personal computer

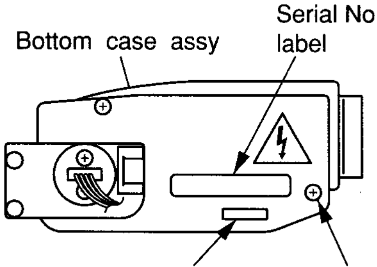
3. Required adjustment tools

For detsails of special jigs necessary for adjustment, refer to page 1-2 and 1-3 of the Section 1.

4. Setup for E. VF section adjustment

Referring to "SEC. 1 DISASSEMBLY" and connect the E.VF WIRE to CN12 of the MAIN board.

(LY20307)


Bottom case assy
Serial No. label
Parts NO.
Screw

LY20307

Adjustment Item : 3.3

Note:

- *This adjustmentalls into a special adjustment that requires a personal computer. For details, refer to "3.1.1 Preparation".*

5. Connection for Service support system

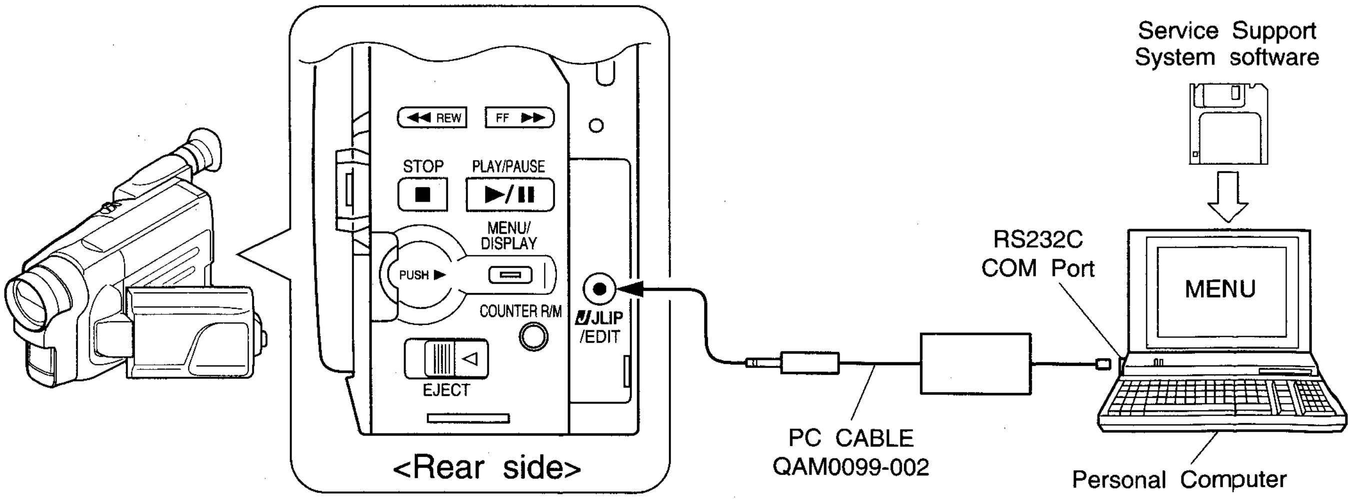

REW
FF
STOP
PLAY/PAUSE
MENU/ DISPLAY
PUSH
COUNTER R/M
JLIP /EDIT
EJECT
<Rear side>
Service Support System software
RS232C COM Port
MENU
PC CABLE QAM0099-002
Personal Computer

Fig. 3-1-1 Connection for Service support system

■ FUSE LOCATION FOR MAIN BOARD ASSEMBLY

FOIL SIDE

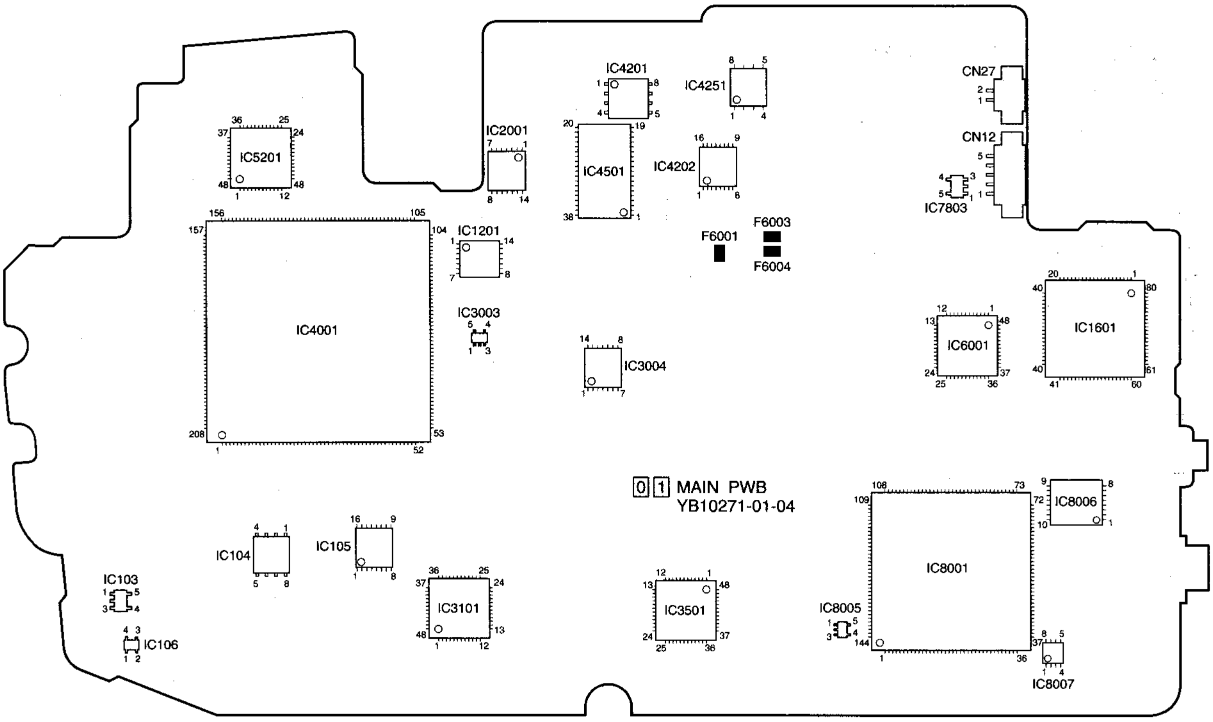

IC4201
IC4251
CN27
CN12
IC2001
IC4501
IC4202
IC7803
IC5201
F6003
F6001
F6004
IC1201
IC4001
IC3003
IC3004
IC6001
IC1601
0 1 MAIN PWB
YB10271-01-04
IC8006
IC104
IC105
IC8001
IC103
IC3101
IC3501
IC8005
IC106
IC8007

Fig. 3-1-2 FUSE location for MAIN board assembly (FOIL SIDE)

COMPONENT SIDE

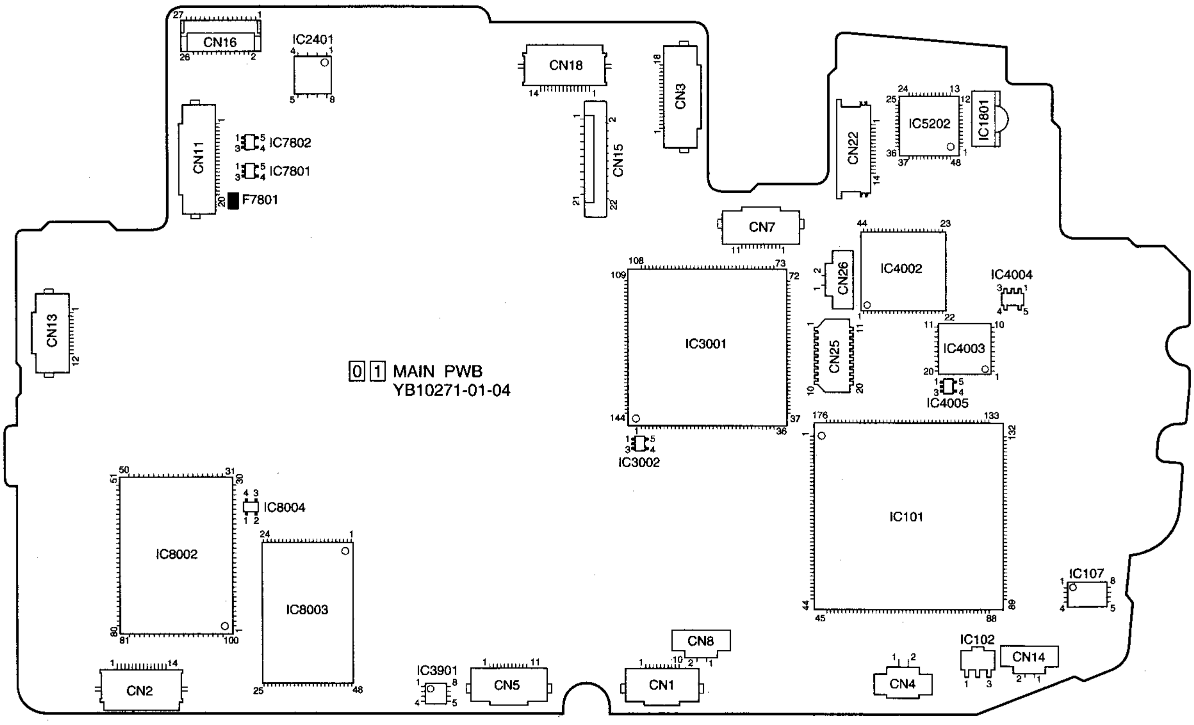

CN16
IC2401
CN18
CN3
CN15
CN11
IC7802
IC7801
F7801
CN22
IC5202
IC1801
CN7
IC4002
CN26
IC4004
CN13
IC3001
CN25
IC4003
IC4005
0 1 MAIN PWB
YB10271-01-04
IC3002
IC8004
IC8002
IC101
IC8003
IC107
CN8
IC102
CN14
IC3901
CN5
CN1
CN4
CN2

Fig. 3-1-3 FUSE location for MAIN board assembly (COMPONENT SIDE)

3.2 ELECTRONIC VIEWFINDER (E. VF) ADJUSTMENT

Notes: *Unless otherwise specified, all measurement points and adjustment parts are located on E. VF board.*

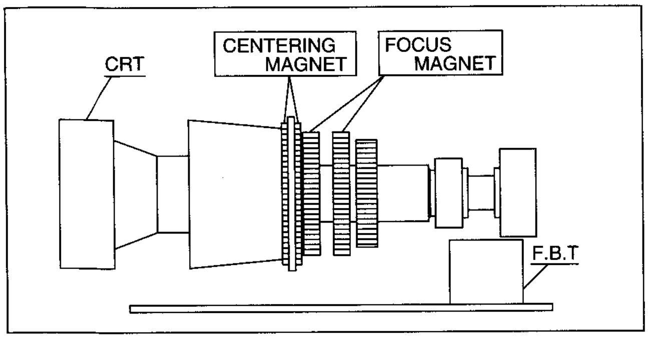


Fig. 3-2-1 E. VF

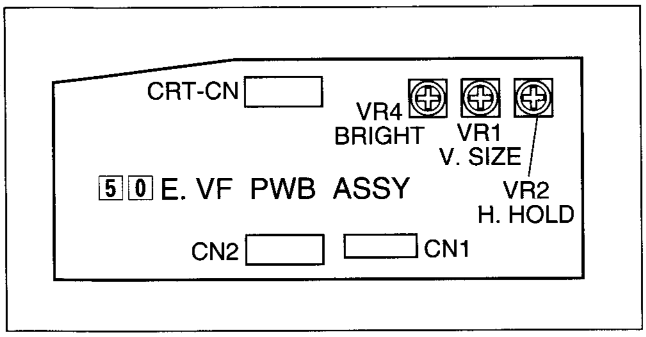


Fig. 3-2-2 E. VF board

3.2.1 Horizontal sync.

Subject	• Alignment tape • Stairstep
Mode	• PB
Equipment	• E. VF
Measurement point	• E. VF screen
Adjusting part	• VR2 (H. HOLD)
Specification	• The midpoint of the two markings

1) Observing the viewfinder screen, turn VR2 fully clockwise to make the picture unstable.
2) Slowly return VR2 counterclockwise to find a point where the picture becomes stable, and mark this position.
3) Turn VR2 fully counterclockwise to make the picture unstable in the same manner as 1) above.
4) Slowly return VR2 clockwise until the picture becomes stable, and mark this position.
5) Finally set VR2 to the midpoint between the two markings of 2) and 4).

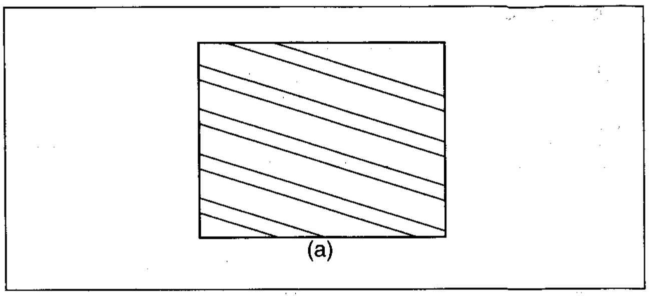


Fig. 3-2-3 Horizontal sync. 1

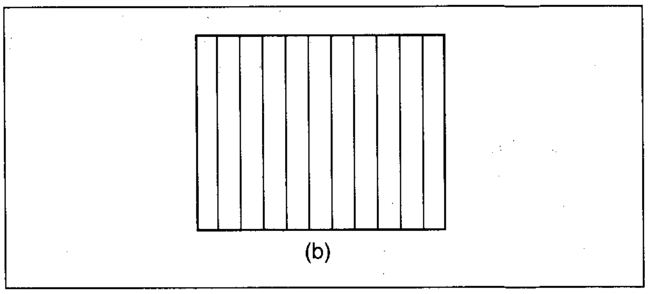


Fig. 3-2-4 Horizontal sync. 2

3.2.2 PLL adjustment

Subject	• Camera picture
Mode	• EE
Equipment	• E. VF
Measurement point	• E. VF screen
Adjusting part	• VR1 (V. SIZE)
Specification	• Normal picture amplitude

1) Observing the viewfinder screen, adjust VR1 for normal picture amplitude.

3.2.3 Centering

Subject	• Alignment tape • Stairstep
Mode	• PB
Equipment	• E. VF
Measurement point	• E. VF screen
Adjusting part	• Centering magnet (CRT assy)
Specification	• The center of the E. VF screen

1) While observing the viewfinder screen, adjust the centering magnet to locate the stairstep in the center of the viewfinder screen.

3.2.4 Focus

Subject	• Camera picture
Mode	• EE
Equipment	• E. VF
Measurment point	• E. VF screen
Adjustment part	• Focus magnet (CRT assy)
Specification	• The center area is clear and defined

1) While observing the viewfinder screen, adjust the focus magnet for the deflecting yoke so that the picture at the central area of the screen is clear and defined.

3.2.5 Brightness

Subject	• -
Mode	• EE • Lens closed
Equipment	• E. VF
Measurment point	• E. VF screen
Adjustment part	• VR4 (BRIGHT)
Specification	• The CRT raster is just barely visible

1) Close the lens with the cap and adjust VR4 so that the raster of the CRT is just visible in the E. VF.

SECTION 4
CHARTS AND DIAGRAMS

NOTES OF SCHEMATIC DIAGRAM

> **Safety precautions**
> **The Components identified by the symbol ⚠ are critical for safety. For continued safety, replace safety critical components only with manufacturer's recommended parts.**

1. Units of components on the schematic diagram

Unless otherwise specified.

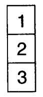
1) All resistance values are in ohm, 1/6 W, 1/8 W (refer to parts list).
   Chip resistors are 1/16 W.
   K: KΩ (1000Ω), M: MΩ (1000KΩ)
2) All capacitance values are in µF, (P: PF).
3) All inductance values are in µH, (m: mH).
4) All diodes are 1SS133, MA165 or 1N4148M (refer to parts list).

2. Indications of control voltage

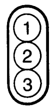
AUX : Active at high

$\overline{\text{AUX}}$ or AUX(L) : Active at low

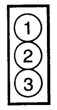
3. Interpreting Connector indications



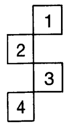
Removable connector



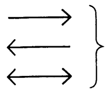
Wire soldered directly on board



Non-removable Board connector



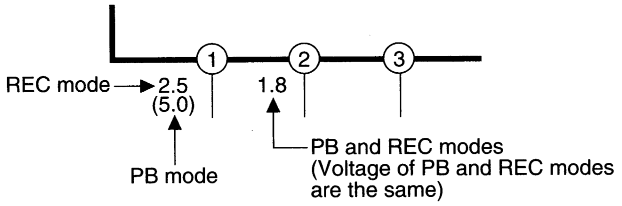
Board to Board



Connected pattern on board
The arrows indicate signal path

4. Voltage measurement

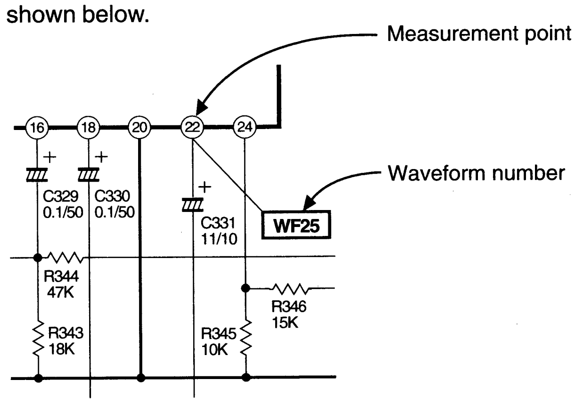
1) Video circuits
   REC : Colour bar signal in SP mode, normal VHS mode
   PB : Alignment tape, colour bar SP mode, normal VHS mode
   — : Unmeasurable or unnecessary to measure
2) Audio circuits
   REC : 1KHz, –8 dBs sine wave signal in SP mode, Normal VHS mode
   PB : REC then playback it
3) Movie Camera circuits
   Measured using a correctly illuminated gray scale or colour bar test charts in the E-E mode
4) Indication on schematic diagram
   Voltage Indications for REC and PB mode on the schematic diagram are as shown below.


REC mode
2.5
(5.0)
1.8
PB mode
PB and REC modes
(Voltage of PB and REC modes are the same)

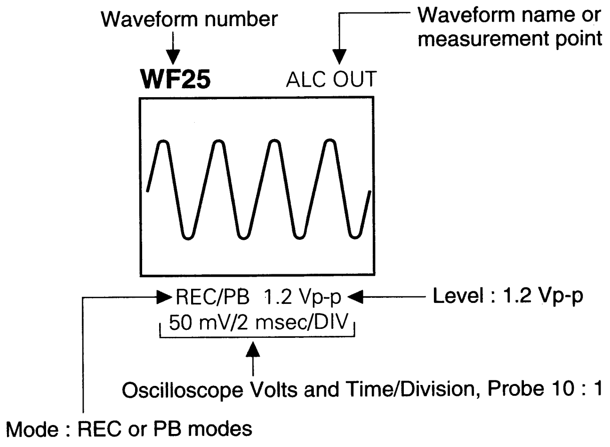
Note: If the voltages are not indicated on the schematic diagram, refer to the voltage charts.

5. Waveform measurement

1) Video circuits
   REC : Colour bar signal in SP mode, normal VHS mode
   PB : Alignment tape, colour bar SP mode, normal VHS mode
2) Audio circuits
   REC : 1KHz, –8 dBs sine wave signal in SP mode, normal VHS mode
   PB : REC then playback it
3) Movie Camera circuits
   Measured using a correctly illuminated gray scale or colour bar test chatrs in the E-E mode
4) Indication on schematic diagram
   Waveform indications on the schematic diagram are as shown below.


Measurement point
Waveform number
16
18
20
22
24
C329
0.1/50
C330
0.1/50
C331
11/10
WF25
R344
47K
R343
18K
R345
10K
R346
15K

5) Waveform indications


Waveform number
Waveform name or measurement point
WF25
ALC OUT
REC/PB 1.2 Vp-p
Level : 1.2 Vp-p
50 mV/2 msec/DIV
Oscilloscope Volts and Time/Division, Probe 10 : 1
Mode : REC or PB modes

6. Signal path Symbols

The arrows indicate the signal path as follows.

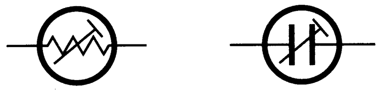
⇨ Playback signal path
➡ Playback and recording signal path
➡ Recording signal path (including E-E signal path)
⇨▷ Capstan servo path
➡▶ Drum servo path

(Example)

⇨ R-Y Playback R-Y signal path
➡ Y Recording Y signal path

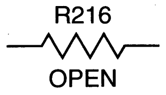
7. Indication of the parts for adjustments

The parts for the adjustments are surrounded with the circle as shown below.



8. Indication of the parts not mounted on the circuit board

"OPEN" is indicated by the parts not mounted on the circuit board.



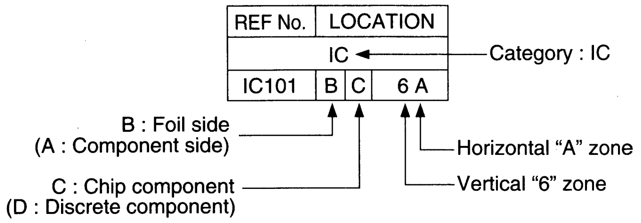
CIRCUIT BOARD NOTES

1. Foil and Component sides

1) Foil side (B side) :
   Parts on the foil side seen from foil face (pattern face) are indicated.
2) Component side (A side) :
   Parts on the component side seen from component face (parts face) indicated.

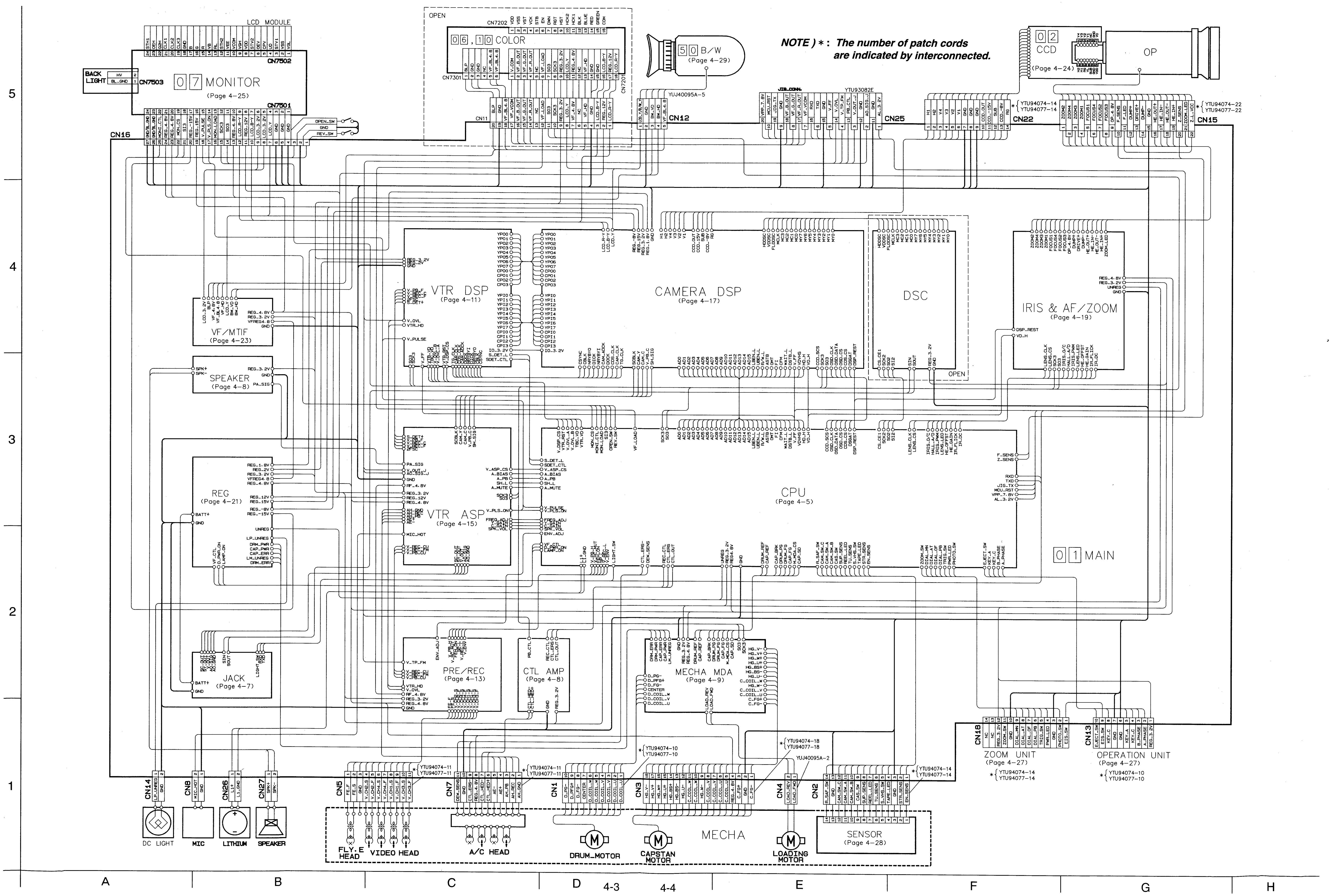
2. Parts location guides

Parts location are indicated by guide scale on the circuit board.


REF No.
LOCATION
IC
Category : IC
IC101
B
C
6 A
B : Foil side
(A : Component side)
C : Chip component
(D : Discrete component)
Horizontal "A" zone
Vertical "6" zone

Note:
For general information in service manual, please refer to the Service Manual of GENERAL INFORMATION Edition 4 No. 82054D (January 1994).

4.1 BOARD INTERCONNECTIONS

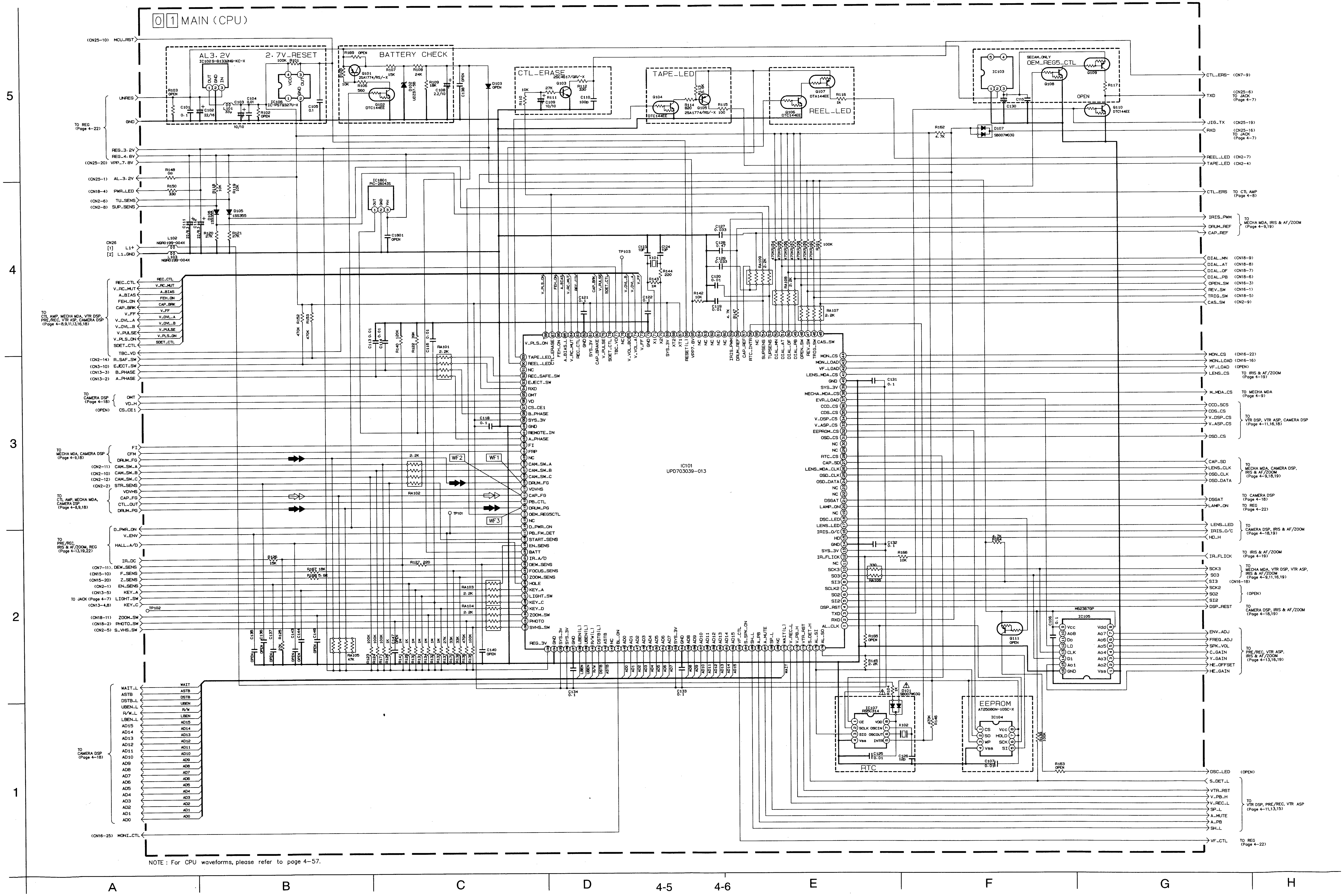


NOTE) *: The number of patch cords are indicated by interconnected.

LCD MODULE
07 MONITOR (Page 4-25)
CN7502
CN7501
CN7503
BACK LIGHT
CN16
OPEN
06, 10 COLOR
CN7202
CN7301
CN7201
CN11
50 B/W (Page 4-29)
YUJ40095A-5
CN12
JIG_CONN.
YTU93082E
CN25
02 CCD (Page 4-24)
OP
YTU94074-14
YTU94077-14
CN22
YTU94074-22
YTU94077-22
CN15
VTR DSP (Page 4-11)
CAMERA DSP (Page 4-17)
DSC
OPEN
IRIS & AF/ZOOM (Page 4-19)
VF/MTIF (Page 4-23)
SPEAKER (Page 4-8)
REG (Page 4-21)
VTR ASP (Page 4-15)
CPU (Page 4-5)
01 MAIN
JACK (Page 4-7)
PRE/REC (Page 4-13)
CTL AMP (Page 4-8)
MECHA MDA (Page 4-9)
CN18
ZOOM UNIT (Page 4-27)
YTU94074-14
YTU94077-14
CN13
OPERATION UNIT (Page 4-27)
YTU94074-10
YTU94077-10
YTU94074-18
YTU94077-18
YUJ40095A-2
YTU94074-11
YTU94077-11
YTU94074-10
YTU94077-10
YTU94074-14
YTU94077-14
CN14
CN8
CN26
CN27
CN5
CN7
CN1
CN3
CN4
CN2
DC LIGHT
MIC
LITHIUM
SPEAKER
FLY.E HEAD
VIDEO HEAD
A/C HEAD
DRUM_MOTOR
CAPSTAN MOTOR
MECHA
LOADING MOTOR
SENSOR (Page 4-28)
1
2
3
4
5
A
B
C
D
E
F
G
H

4.2 CPU SCHEMATIC DIAGRAM

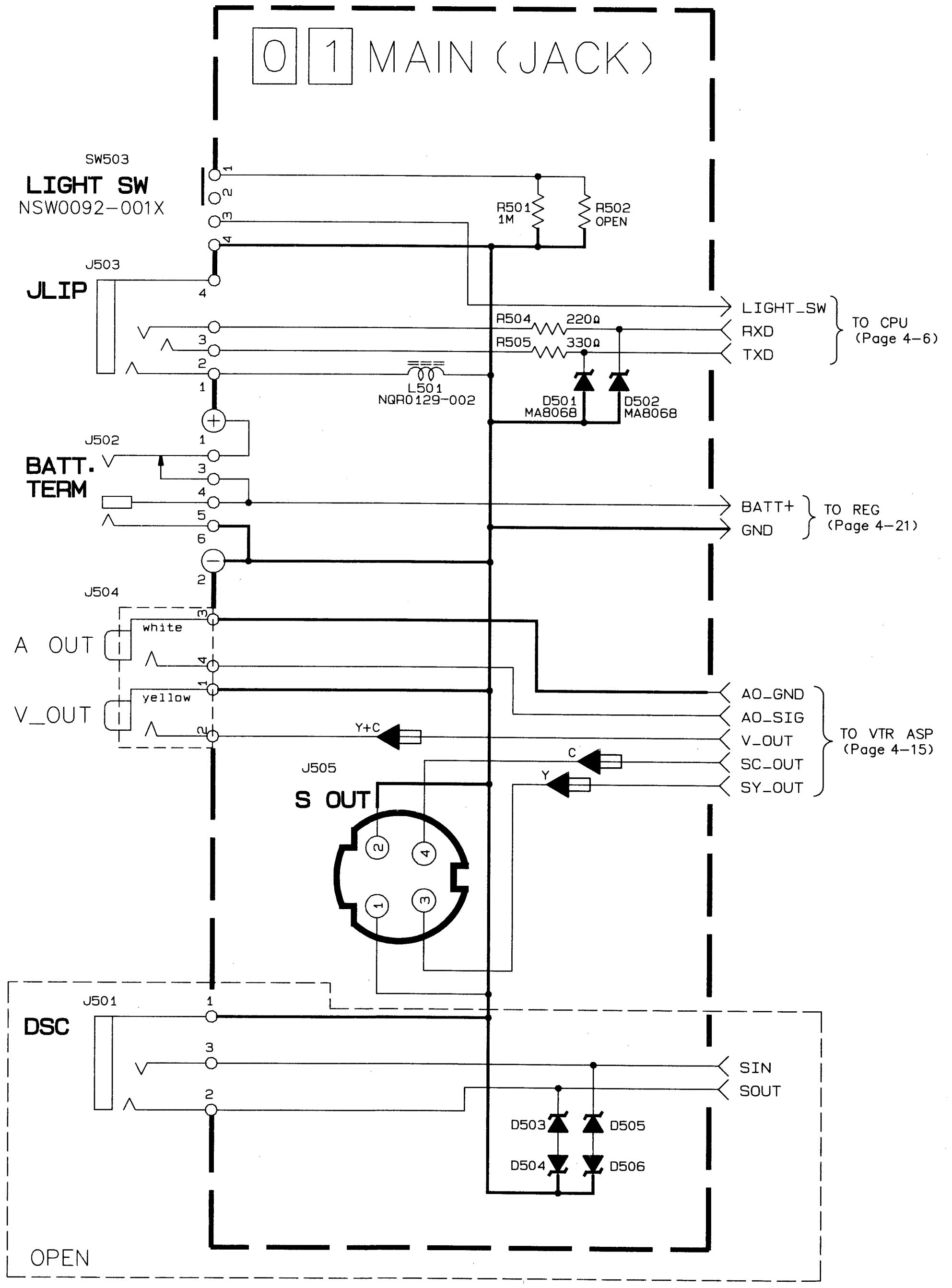
NOTE: When ordering parts, be sure to order according to the Part Number indicated in the Parts List.

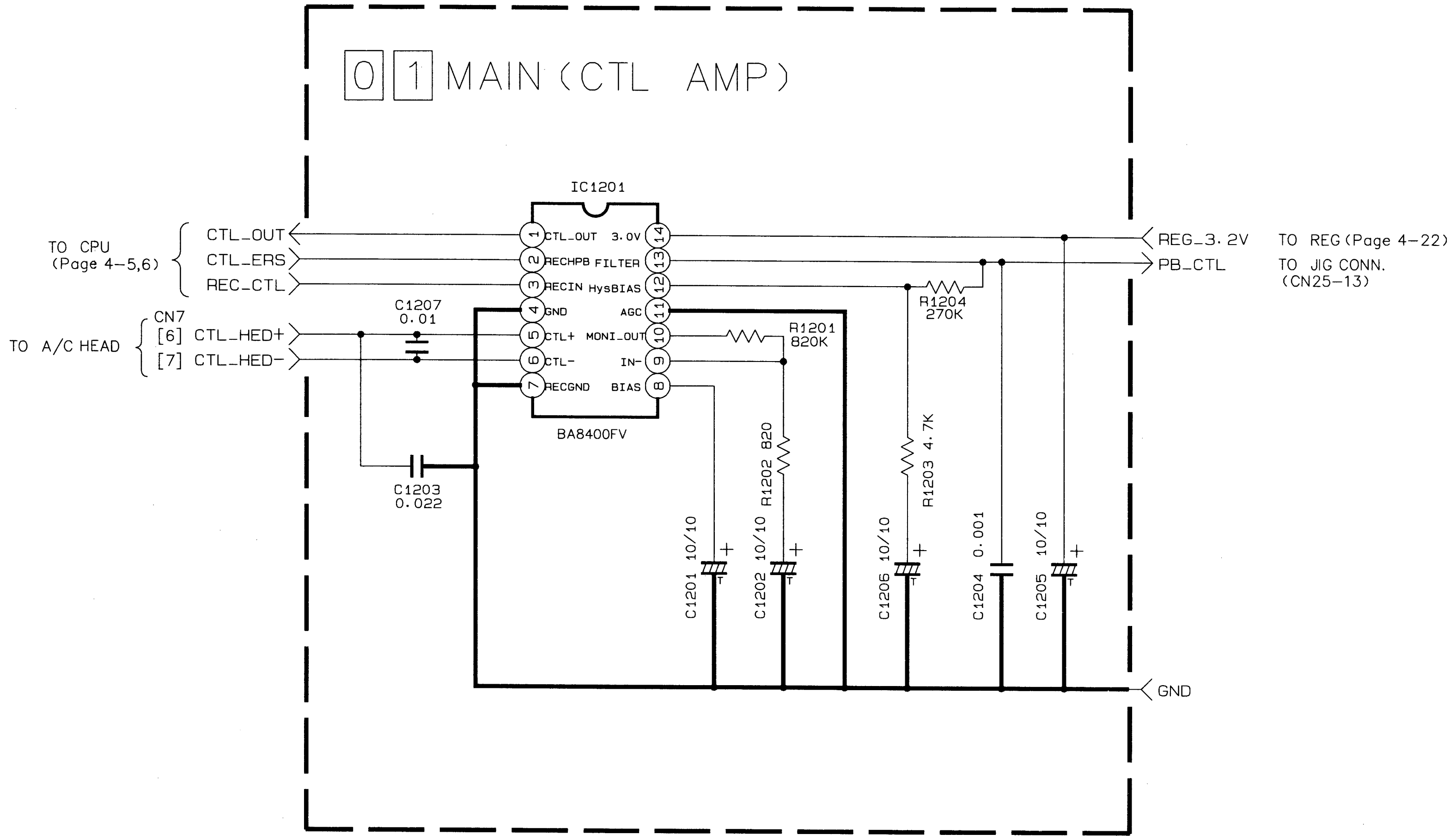

01 MAIN (CPU)
AL3.2V
2.7V_RESET
BATTERY CHECK
CTL_ERASE
TAPE_LED
REEL_LED
SECAM_ONLY
OEM_REG5_CTL
OPEN
IC1801
IC101
UPD703039-013
IC105
M62367GP
EEPROM
AT25080N-10SC-X
IC104
RTC
IC107
X101
X102
WF1
WF2
WF3
TP101
TP102
TP103
RA101
RA102
RA103
RA104
RA105
RA106
RA107
RA108
RA109
Q101
Q102
Q103
Q104
Q105
Q106
Q107
Q108
Q109
Q110
Q111
D101
D102
D103
D105
D106
D107
(CN25-10) MCU_RST
UNREG
GND
TO REG (Page 4-22)
REG_3.2V
REG_4.8V
(CN25-20) VPP_7.8V
(CN25-1) AL_3.2V
(CN18-4) PWR_LED
(CN2-6) TU_SENS
(CN2-8) SUP_SENS
CN26 [1] L1+
[2] L1_GND
REC_CTL
V_RC_MUT
A_BIAS
FEH_ON
CAP_BRK
V_FF
V_DVL_A
V_DVL_B
V_PULSE
V_PLS_ON
SDET_CTL
TBC_VD
TO CTL AMP, MECHA MDA, VTR DSP, PRE/REC, VTR ASP, CAMERA DSP (Page 4-8,9,11,13,16,18)
(CN2-14) R_SAF_SW
(CN3-10) EJECT_SW
(CN13-3) B_PHASE
(CN13-2) A_PHASE
TO CAMERA DSP (Page 4-18)
OMT
VD_H
(OPEN) CS_CE1
TO MECHA MDA, CAMERA DSP (Page 4-9,18)
FI
CFN
DRUM_FG
(CN2-11) CAM_SW_A
(CN2-10) CAM_SW_B
(CN2-12) CAM_SW_C
(CN2-2) STR_SENS
TO CTL AMP, MECHA MDA, CAMERA DSP (Page 4-8,9,18)
VDVHS
CAP_FG
CTL_OUT
DRUM_PG
TO PRE/REC, IRIS & AF/ZOOM, REG (Page 4-13,19,22)
D_PWR_ON
V_ENV
HALL_A/D
IR_DC
(CN7-11) DEW_SENS
(CN15-10) F_SENS
(CN15-20) Z_SENS
(CN2-1) EN_SENS
(CN13-5) KEY_A
TO JACK (Page 4-7) LIGHT_SW
(CN13-4,8) KEY_C
(CN18-11) ZOOM_SW
(CN18-2) PHOTO_SW
(CN2-5) S_VHS_SW
TO CAMERA DSP (Page 4-18)
WAIT_L
ASTB
DSTB_L
UBEN_L
R/W_L
LBEN_L
AD15
AD14
AD13
AD12
AD11
AD10
AD9
AD8
AD7
AD6
AD5
AD4
AD3
AD2
AD1
AD0
(CN16-25) MONI_CTL
CTL_ERS- (CN7-9)
TXD (CN25-6) TO JACK (Page 4-7)
JIG_TX (CN25-19)
RXD (CN25-16) TO JACK (Page 4-7)
REEL_LED (CN2-7)
TAPE_LED (CN2-4)
CTL_ERS TO CTL AMP (Page 4-8)
IRIS_PWM
DRUM_REF
CAP_REF
TO MECHA MDA, IRIS & AF/ZOOM (Page 4-9,19)
DIAL_MN (CN18-9)
DIAL_AT (CN18-8)
DIAL_OF (CN18-7)
DIAL_PB (CN18-6)
OPEN_SW (CN16-3)
REV_SW (CN16-1)
TRIG_SW (CN16-5)
CAS_SW (CN2-9)
MON_CS (CN16-22)
MON_LOAD (CN16-16)
VF_LOAD (OPEN)
LENS_CS TO IRIS & AF/ZOOM (Page 4-19)
M_MDA_CS TO MECHA MDA (Page 4-9)
CCD_SCS
CDS_CS
V_DSP_CS
V_ASP_CS
TO VTR DSP, VTR ASP, CAMERA DSP (Page 4-11,16,18)
OSD_CS
CAP_SD
LENS_CLK
OSD_CLK
OSD_DATA
TO MECHA MDA, CAMERA DSP, IRIS & AF/ZOOM (Page 4-9,18,19)
DSGAT TO CAMERA DSP (Page 4-18)
LAMP_ON TO REG (Page 4-22)
LENS_LED
IRIS_O/C
HD_H
TO CAMERA DSP, IRIS & AF/ZOOM (Page 4-18,19)
IR_FLICK TO IRIS & AF/ZOOM (Page 4-19)
SCK3
SO3
SI3
TO MECHA MDA, VTR DSP, VTR ASP, IRIS & AF/ZOOM (Page 4-9,11,16,19) (CN16-18)
SCK2
SO2
SI2
(OPEN)
DSP_RST TO CAMERA DSP, IRIS & AF/ZOOM (Page 4-18,19)
ENV_ADJ
FREQ_ADJ
SPK_VOL
C_GAIN
Y_GAIN
HE_OFFSET
HE_GAIN
TO PRE/REC, VTR ASP, IRIS & AF/ZOOM (Page 4-13,16,19)
DSC_LED (OPEN)
S_DET_L
VTR_RST
V_PB_H
V_REC_L
SP_L
A_MUTE
A_PB
SH_L
TO VTR DSP, PRE/REC, VTR ASP (Page 4-11,13,15)
VF_CTL TO REG (Page 4-22)
A
B
C
D
E
F
G
H
1
2
3
4
5

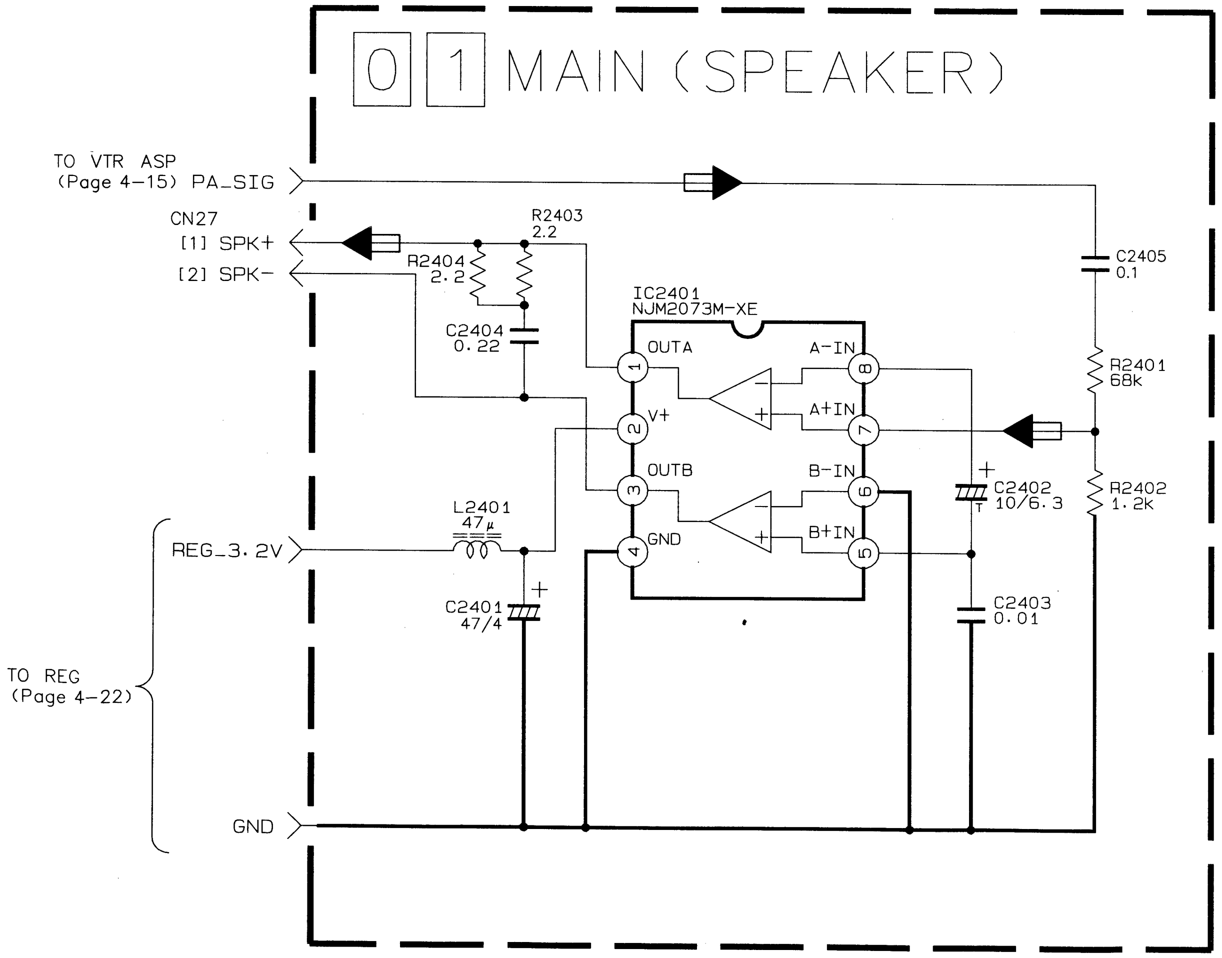
NOTE : For CPU waveforms, please refer to page 4-57.

4.3 JACK, CTL AMP AND SPEAKER SCHEMATIC DIAGRAMS

***NOTE:** When ordering parts, be sure to order according to the Part Number indicated in the Parts List.*

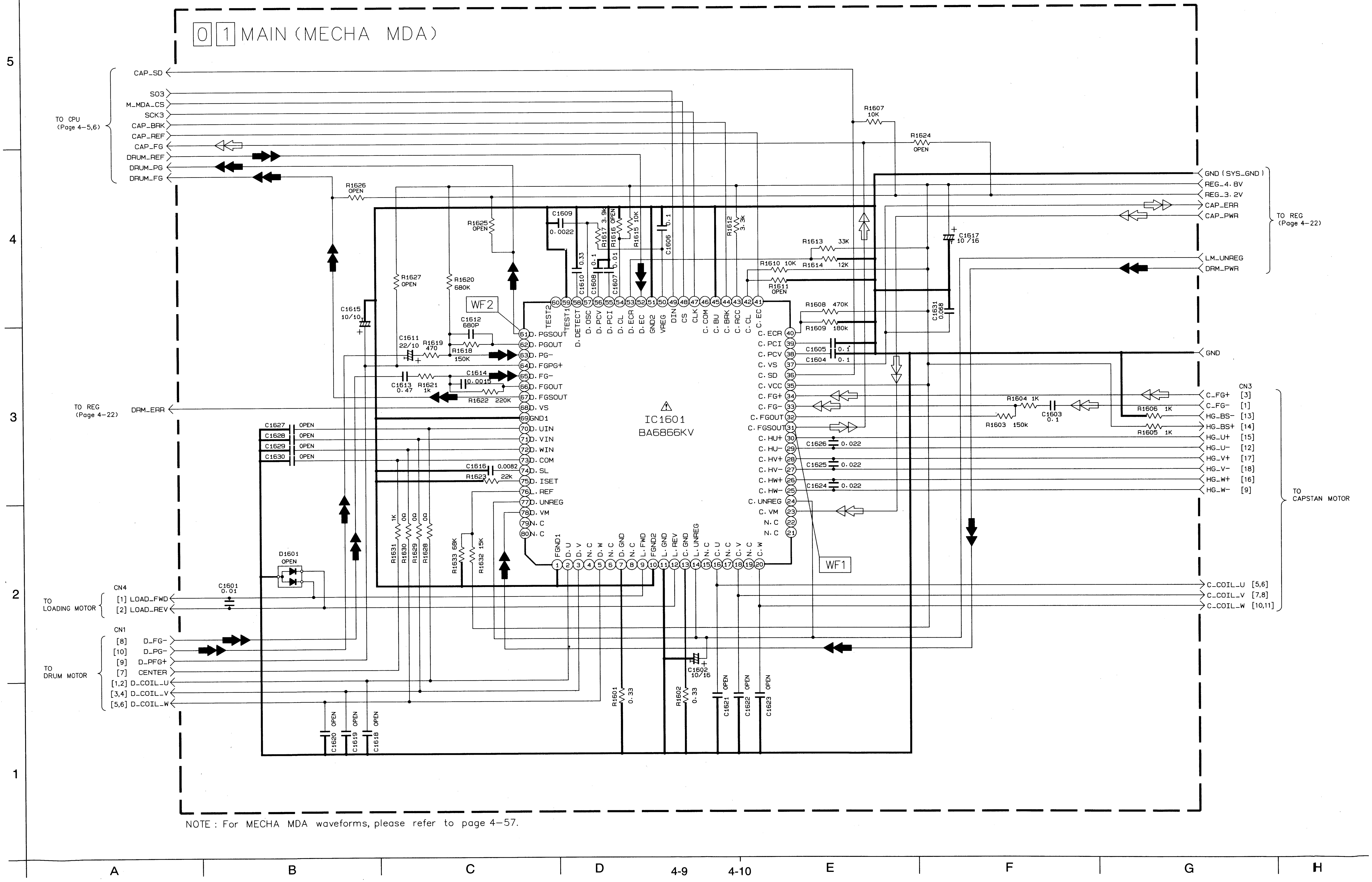

01 MAIN (JACK)
SW503
LIGHT SW
NSW0092-001X
J503
JLIP
R501 1M
R502 OPEN
R504 220Ω
R505 330Ω
L501 NQR0129-002
D501 MA8068
D502 MA8068
LIGHT_SW
RXD
TXD
TO CPU (Page 4-6)
J502
BATT. TERM
BATT+
GND
TO REG (Page 4-21)
J504
A OUT
white
V_OUT
yellow
Y+C
C
Y
AO_GND
AO_SIG
V_OUT
SC_OUT
SY_OUT
TO VTR ASP (Page 4-15)
J505
S OUT
J501
DSC
SIN
SOUT
D503
D504
D505
D506
OPEN


01 MAIN (CTL AMP)
TO CPU (Page 4-5,6)
CTL_OUT
CTL_ERS
REC_CTL
TO A/C HEAD
CN7
[6] CTL_HED+
[7] CTL_HED-
IC1201
CTL_OUT
RECHPB
RECIN
GND
CTL+
CTL-
RECGND
3.0V
FILTER
HysBIAS
AGC
MONI_OUT
IN-
BIAS
BA8400FV
C1207 0.01
C1203 0.022
R1201 820K
R1204 270K
R1202 820
R1203 4.7K
C1201 10/10
C1202 10/10
C1206 10/10
C1204 0.001
C1205 10/10
REG_3.2V
PB_CTL
GND
TO REG (Page 4-22)
TO JIG CONN. (CN25-13)


01 MAIN (SPEAKER)
TO VTR ASP (Page 4-15) PA_SIG
CN27
[1] SPK+
[2] SPK-
R2403 2.2
R2404 2.2
C2404 0.22
IC2401 NJM2073M-XE
OUTA
V+
OUTB
GND
A-IN
A+IN
B-IN
B+IN
L2401 47μ
C2401 47/4
C2405 0.1
R2401 68k
R2402 1.2k
C2402 10/6.3
C2403 0.01
REG_3.2V
TO REG (Page 4-22)
GND

4.4 MECHA MDA SCHEMATIC DIAGRAM

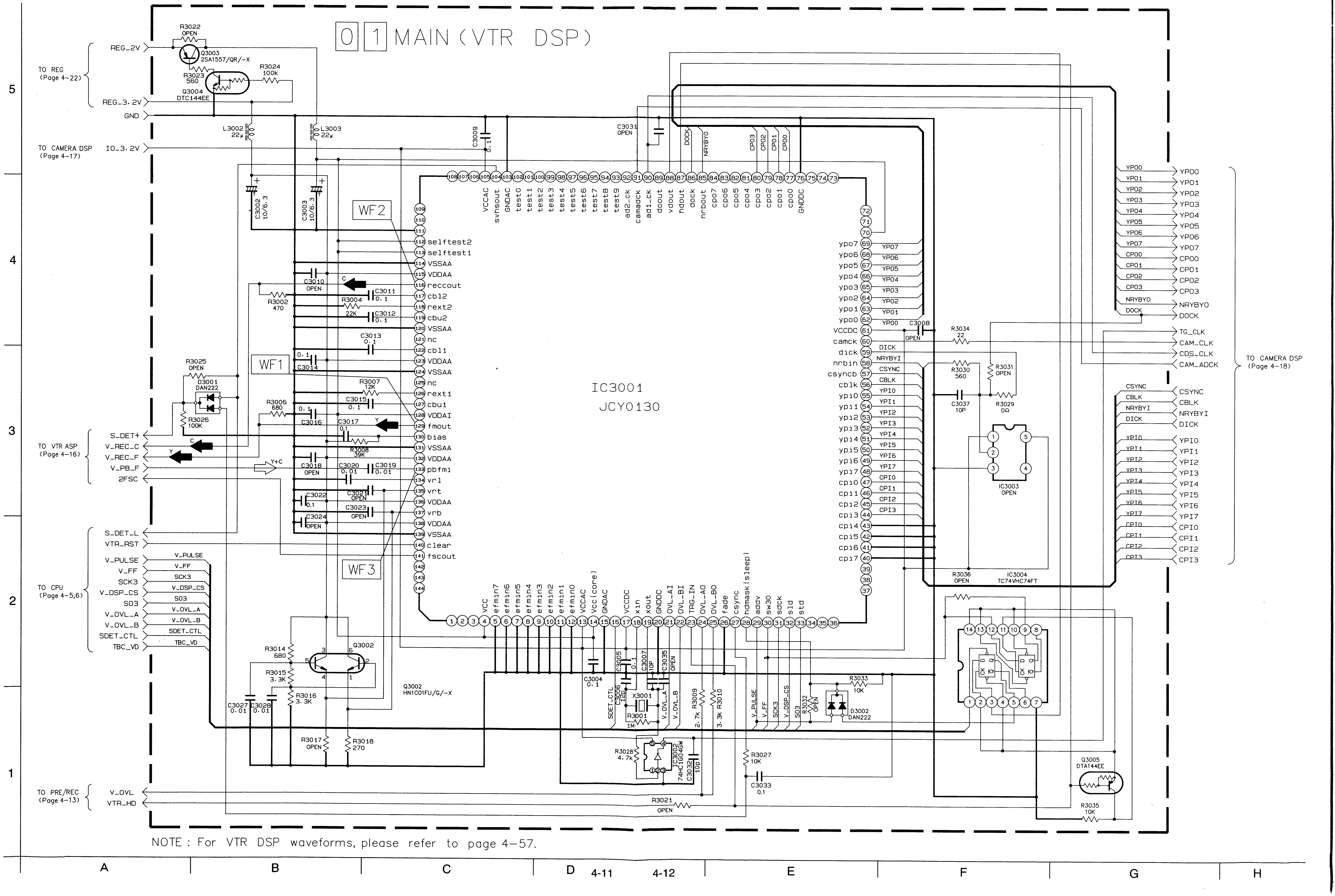
NOTE: When ordering parts, be sure to order according to the Part Number indicated in the Parts List.


01 MAIN (MECHA MDA)
TO CPU (Page 4–5,6)
CAP_SD
SO3
M_MDA_CS
SCK3
CAP_BRK
CAP_REF
CAP_FG
DRUM_REF
DRUM_PG
DRUM_FG
TO REG (Page 4–22)
DRM_ERR
GND (SYS_GND)
REG_4.8V
REG_3.2V
CAP_ERR
CAP_PWR
LM_UNREG
DRM_PWR
TO REG (Page 4–22)
GND
CN3
C_FG+ [3]
C_FG– [1]
HG_BS– [13]
HG_BS+ [14]
HG_U+ [15]
HG_U– [12]
HG_V+ [17]
HG_V– [18]
HG_W+ [16]
HG_W– [9]
TO CAPSTAN MOTOR
C_COIL_U [5,6]
C_COIL_V [7,8]
C_COIL_W [10,11]
CN4
TO LOADING MOTOR
[1] LOAD_FWD
[2] LOAD_REV
CN1
TO DRUM MOTOR
[8] D_FG–
[10] D_PG–
[9] D_PFG+
[7] CENTER
[1,2] D_COIL_U
[3,4] D_COIL_V
[5,6] D_COIL_W
IC1601
BA6866KV
WF1
WF2
D1601 OPEN
C1601 0.01
R1601 0.33
R1602 0.33
C1602 10/16
C1603 0.1
R1603 150k
R1604 1K
R1605 1K
R1606 1K
R1607 10K
R1608 470K
R1609 180K
R1610 10K
R1611 OPEN
R1612 3.3K
R1613 33K
R1614 12K
R1615 10K
R1616 OPEN
R1617 3.9K
R1618 150K
R1619 470
R1620 680K
R1621 1K
R1622 220K
R1623 22K
R1624 OPEN
R1625 OPEN
R1626 OPEN
R1627 OPEN
R1628 0Ω
R1629 0Ω
R1630 0Ω
R1631 1K
R1632 15K
R1633 68K
C1604 0.1
C1605 0.1
C1606 0.1
C1607 0.01
C1608 0.1
C1609 0.0022
C1610 0.33
C1611 22/10
C1612 680P
C1613 0.47
C1614 0.0015
C1615 10/10
C1616 0.0082
C1617 10/16
C1618 OPEN
C1619 OPEN
C1620 OPEN
C1621 OPEN
C1622 OPEN
C1623 OPEN
C1624 0.022
C1625 0.022
C1626 0.022
C1627 OPEN
C1628 OPEN
C1629 OPEN
C1630 OPEN
C1631 0.068
1 FGND1
2 D.U
3 D.V
4 N.C
5 D.W
6 N.C
7 D.GND
8 N.C
9 L.FWD
10 FGND2
11 L.GND
12 L.REV
13 C.GND
14 L.UNREG
15 N.C
16 C.U
17 N.C
18 C.V
19 N.C
20 C.W
21 N.C
22 N.C
23 C.VM
24 C.UNREG
25 C.HW–
26 C.HW+
27 C.HV–
28 C.HV+
29 C.HU–
30 C.HU+
31 C.FGSOUT
32 C.FGOUT
33 C.FG–
34 C.FG+
35 C.VCC
36 C.SD
37 C.VS
38 C.PCV
39 C.PCI
40 C.ECR
41 C.EC
42 C.CL
43 C.RCC
44 C.BRK
45 C.BU
46 C.COM
47 CLK
48 CS
49 DIN
50 VREG
51 GND2
52 D.EC
53 D.ECR
54 D.CL
55 D.PCI
56 D.PCV
57 D.OSC
58 D.DETECT
59 TEST1
60 TEST2
61 D.PGSOUT
62 D.PGOUT
63 D.PG–
64 D.FGPG+
65 D.FG–
66 D.FGOUT
67 D.FGSOUT
68 D.VS
69 GND1
70 D.UIN
71 D.VIN
72 D.WIN
73 D.COM
74 D.SL
75 D.ISET
76 L.REF
77 D.UNREG
78 D.VM
79 N.C
80 N.C
5
4
3
2
1
A
B
C
D
E
F
G
H

NOTE : For MECHA MDA waveforms, please refer to page 4–57.

4.5 VTR DSP SCHEMATIC DIAGRAM

NOTE: When ordering parts, be sure to order according to the Part Number indicated in the Parts List.

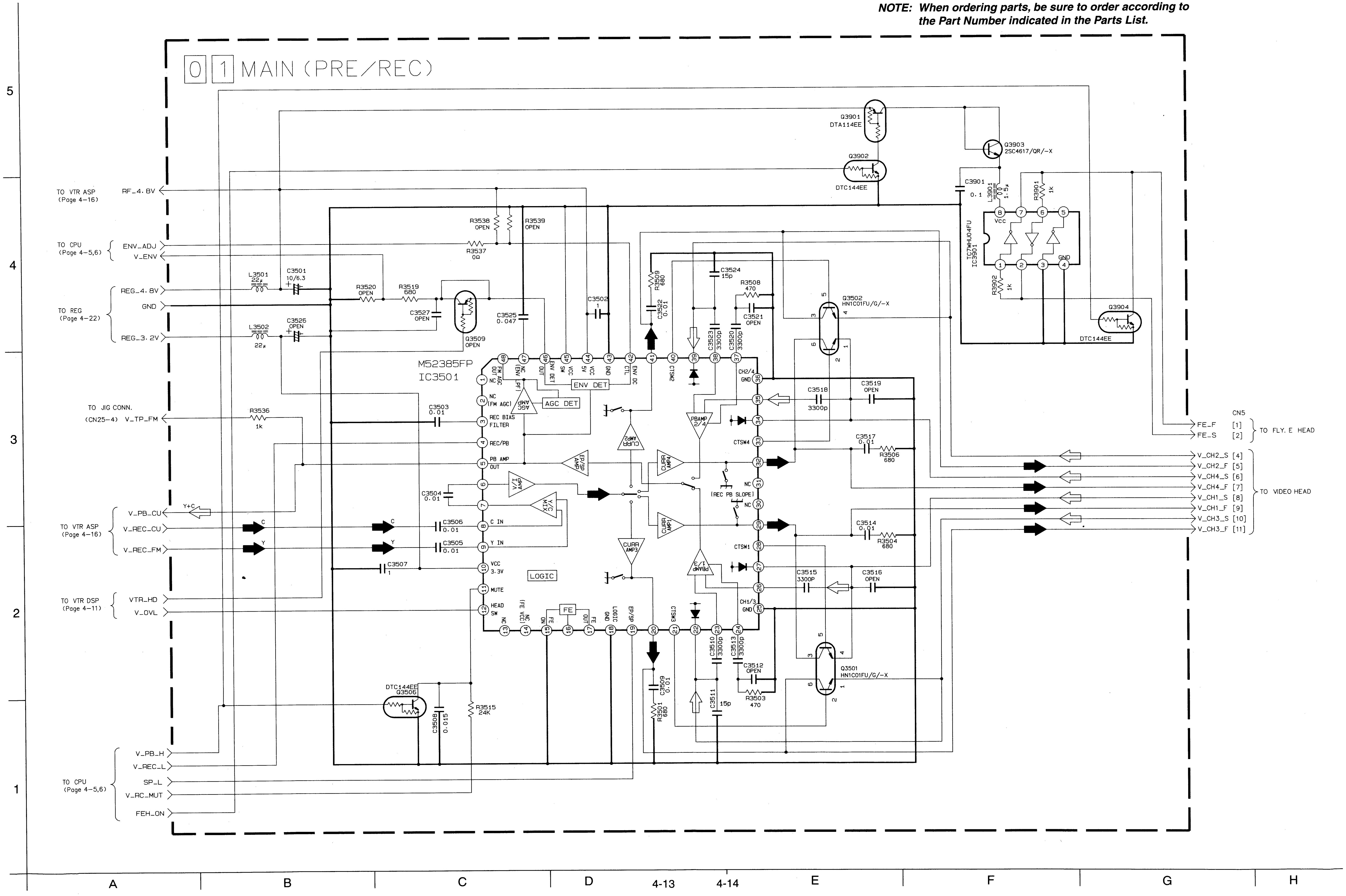


01 MAIN (VTR DSP)
IC3001
JCY0130
TO REG (Page 4-22)
REG_2V
REG_3.2V
GND
TO CAMERA DSP (Page 4-17)
IO_3.2V
TO VTR ASP (Page 4-16)
S_DET+
V_REC_C
V_REC_F
V_PB_F
2FSC
TO CPU (Page 4-5,6)
S_DET_L
VTR_RST
V_PULSE
V_FF
SCK3
V_DSP_CS
S03
V_OVL_A
V_OVL_B
SDET_CTL
TBC_VD
TO PRE/REC (Page 4-13)
V_OVL
VTR_HD
TO CAMERA DSP (Page 4-18)
YP00
YP01
YP02
YP03
YP04
YP05
YP06
YP07
CP00
CP01
CP02
CP03
NRYBY0
DOCK
TG_CLK
CAM_CLK
CDS_CLK
CAM_ADCK
CSYNC
CBLK
NRYBYI
DICK
YPI0
YPI1
YPI2
YPI3
YPI4
YPI5
YPI6
YPI7
CPI0
CPI1
CPI2
CPI3
R3022 OPEN
Q3003 2SA1557/QR/-X
R3023 560
Q3004 DTC144EE
R3024 100k
L3002 22μ
L3003 22μ
C3002 10/6.3
C3003 10/6.3
C3009 0.1
C3031 OPEN
WF1
WF2
WF3
C3010 OPEN
C3011 0.1
R3004 22K
R3002 470
C3012 0.1
C3013 0.1
C3014 0.1
R3025 OPEN
D3001 DAN222
R3026 100K
R3007 12K
R3006 680
C3015 0.1
C3016 0.1
C3017 0.1
R3008 39K
C3018 OPEN
C3020 0.01
C3019 0.01
C3022 0.1
C3021 OPEN
C3023 OPEN
C3024 OPEN
R3014 680
R3015 3.3K
R3016 3.3K
Q3002 HN1C01FU/G/-X
C3027 0.01
C3028 0.01
R3017 OPEN
R3018 270
C3004 0.1
C3005 15P
C3006 15P
C3007 10P
C3035 OPEN
X3001
R3001 1M
R3028 4.7k
IC3002 74HC1G04GW
C3032 10p
R3009 2.7K
R3010 3.3K
R3032 OPEN
R3033 10K
D3002 DAN222
R3027 10K
C3033 0.1
R3021 OPEN
C3008 OPEN
R3034 22
R3030 560
R3031 OPEN
C3037 10P
R3029 0Ω
IC3003 OPEN
R3036 OPEN
IC3004 TC74VHC74FT
Q3005 DTA144EE
R3035 10K
selftest2
selftest1
VSSAA
VDDAA
reccout
cbl2
rext2
cbu2
nc
cbl1
rext1
cbu1
VDDAI
fmout
bias
pbfmi
vrl
vrt
vrb
clear
fscout
VCCAC
svhsout
GNDAC
test0
test1
test2
test3
test4
test5
test6
test7
test8
test9
ad2_ck
camadck
ad1_ck
doout
vdout
hdout
dock
nrbout
cpo7
cpo6
cpo5
cpo4
cpo3
cpo2
cpo1
cpo0
GNDDC
ypo7
ypo6
ypo5
ypo4
ypo3
ypo2
ypo1
ypo0
VCCDC
camck
dick
nrbin
csyncb
cblk
ypi0
ypi1
ypi2
ypi3
ypi4
ypi5
ypi6
ypi7
cpi0
cpi1
cpi2
cpi3
cpi4
cpi5
cpi6
cpi7
VCC
efmin7
efmin6
efmin5
efmin4
efmin3
efmin2
efmin1
efmin0
VCCAC
Vcc(core)
GNDAC
VCCDC
xin
xout
GNDDC
OVL_AI
OVL_BI
TRG_IN
OVL_AO
OVL_BO
fade
csync
hdmask(sleep)
addv
sw30
sdck
sld
std
A
B
C
D
E
F
G
H
1
2
3
4
5

NOTE : For VTR DSP waveforms, please refer to page 4-57.

4.6 PRE/REC SCHEMATIC DIAGRAM

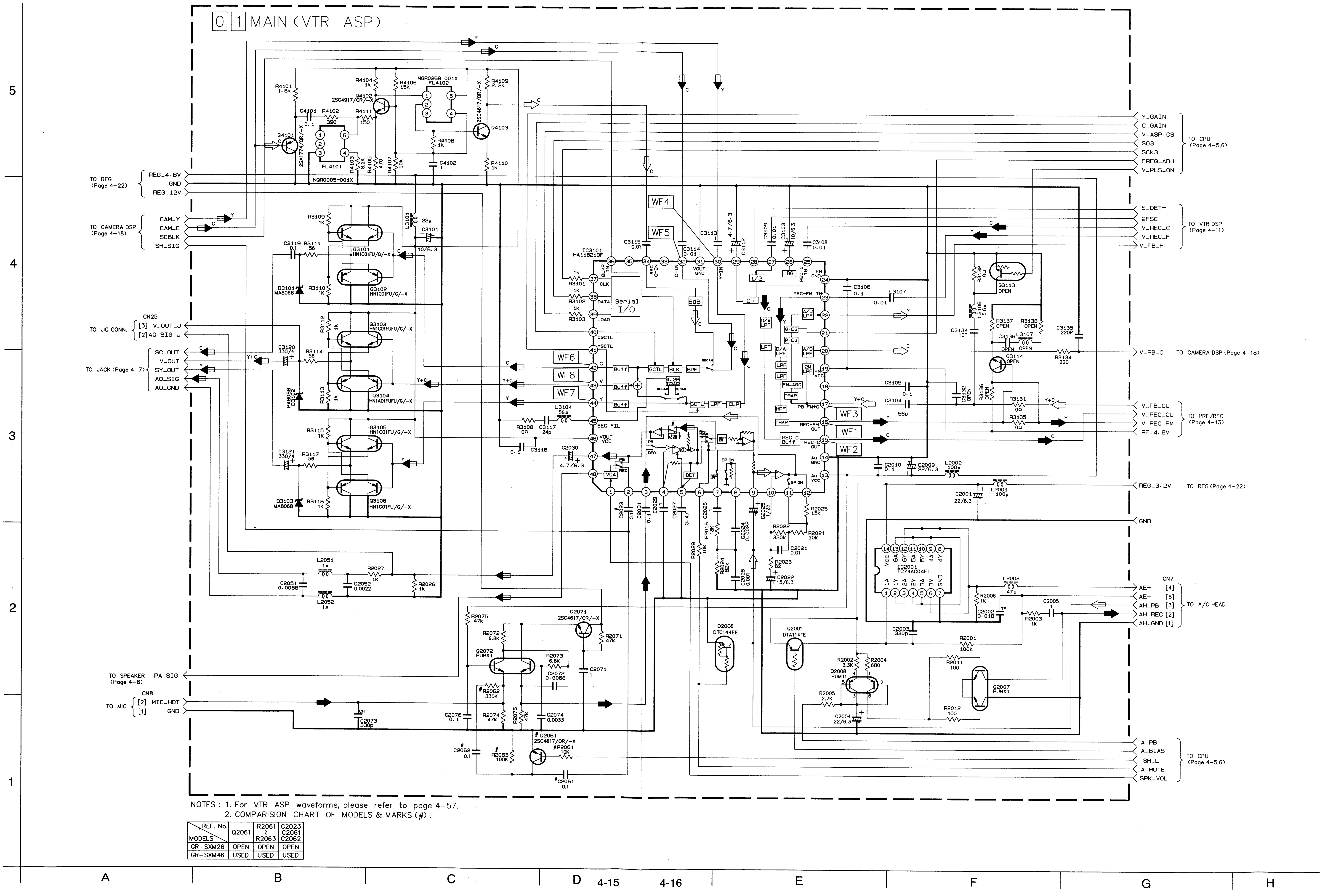
NOTE: When ordering parts, be sure to order according to the Part Number indicated in the Parts List.



01 MAIN (PRE/REC)
TO VTR ASP (Page 4-16) RF_4.8V
TO CPU (Page 4-5,6) ENV_ADJ V_ENV
TO REG (Page 4-22) REG_4.8V GND REG_3.2V
TO JIG CONN. (CN25-4) V_TP_FM
TO VTR ASP (Page 4-16) V_PB_CU V_REC_CU V_REC_FM
TO VTR DSP (Page 4-11) VTR_HD V_OVL
TO CPU (Page 4-5,6) V_PB_H V_REC_L SP_L V_RC_MUT FEH_ON
M52385FP IC3501
Q3901 DTA114EE
Q3902 DTC144EE
Q3903 2SC4617/QR/-X
Q3904 DTC144EE
IC3901 TC7WHU04FU
Q3502 HN1C01FU/G/-X
Q3501 HN1C01FU/G/-X
Q3506 DTC144EE
Q3509 OPEN
L3501 22µ
L3502 22µ
L3901 1.5µ
C3501 10/6.3
C3526 OPEN
C3527 OPEN
C3525 0.047
C3502 1
C3503 0.01
C3504 0.01
C3505 0.01
C3506 0.01
C3507 1
C3508 0.015
C3509 0.01
C3510 3300p
C3511 15p
C3512 OPEN
C3513 3300p
C3514 0.01
C3515 3300P
C3516 OPEN
C3517 0.01
C3518 3300p
C3519 OPEN
C3520 3300p
C3521 OPEN
C3522 0.01
C3523 3300p
C3524 15p
C3901 0.1
R3501 680
R3503 470
R3504 680
R3506 680
R3508 470
R3509 680
R3515 24K
R3519 680
R3520 OPEN
R3536 1k
R3537 0Ω
R3538 OPEN
R3539 OPEN
R3901 1k
R3902 1k
AGC DET
ENV DET
AGC AMP
PBAMP 2/4
PBAMP 1/3
CURR AMP1
CURR AMP2
CURR AMP3
CURR AMP4
EP/SP AMP
Y/C MIX
V/I AMP
LOGIC
FE
1 NC
2 NC (FM AGC)
3 REC BIAS FILTER
4 REC/PB
5 PB AMP OUT
6
7
8 C IN
9 Y IN
10 VCC 3.3V
11 MUTE
12 HEAD SW
13 NC
14 NC (FE VCC)
15 NC FE
16
17 FE OUT
18 GND
19 LOGIC GND
20 EP/SP
21 SWS13
22
23
24
25 CH1/3 GND
26
27
28 CTSW1
29
30 NC
31 NC (REC PB SLOPE)
32
33 CTSW4
34
35
36 CH2/4 GND
37
38
39
40 SWS24
41
42 ENV DC
43 CTL
44 VCC 5V
45 VCC SW
46 ENV DET OUT
47 NC (ENV LPF)
48 FM AGC OUT
VCC GND
CN5
FE_F [1]
FE_S [2]
TO FLY. E HEAD
V_CH2_S [4]
V_CH2_F [5]
V_CH4_S [6]
V_CH4_F [7]
V_CH1_S [8]
V_CH1_F [9]
V_CH3_S [10]
V_CH3_F [11]
TO VIDEO HEAD
Y+C
C
Y
A B C D E F G H
1 2 3 4 5

4.7 VTR ASP SCHEMATIC DIAGRAM

NOTE: When ordering parts, be sure to order according to the Part Number indicated in the Parts List.

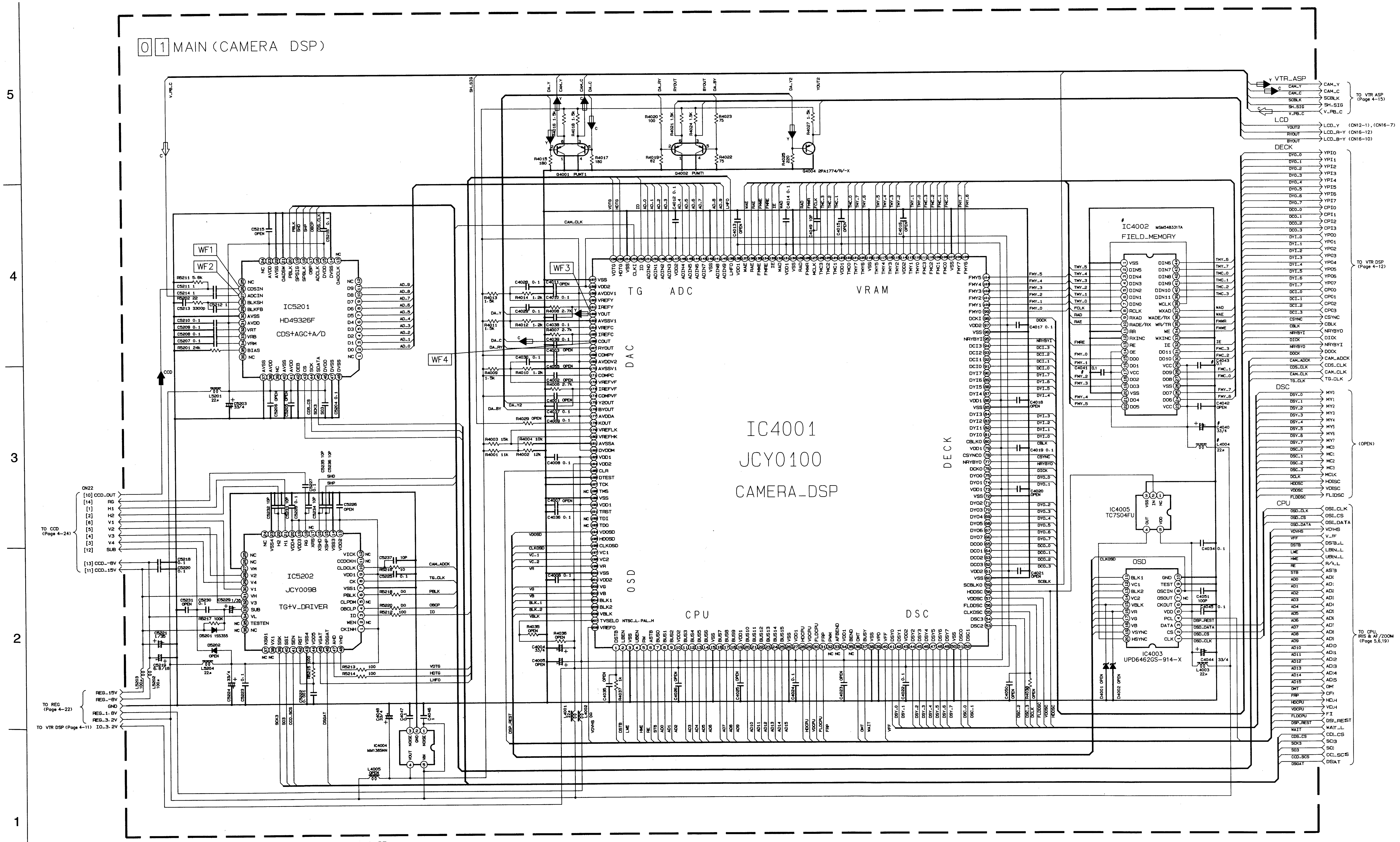

01 MAIN (VTR ASP)
5
4
3
2
1
A
B
C
D
E
F
G
H
TO REG (Page 4-22)
REG_4.8V
GND
REG_12V
TO CAMERA DSP (Page 4-18)
CAM_Y
CAM_C
SCBLK
SH_SIG
CN25
TO JIG CONN.
[3] V_OUT_J
[2] AO_SIG_J
TO JACK (Page 4-7)
SC_OUT
V_OUT
SY_OUT
AO_SIG
AO_GND
TO SPEAKER (Page 4-8)
PA_SIG
CN8
TO MIC
[2] MIC_HOT
[1] GND
R4101 1.8K
Q4101 2SA1774/QR/-X
C4101 0.1
R4102 390
FL4101
NQR0005-001X
R4103 8.2K
R4105 470
R4107 10K
R4104 1K
Q4102 2SC4917/QR/-X
R4111 150
R4106 15K
NQR0268-001X FL4102
R4108 1K
C4102 1
2SC4617/QR/-X
Q4103
R4109 2.2K
R4110 1K
R3109 1K
Q3101 HN1C01FU/G/-X
C3119 0.1
R3111 56
D3101 MA8068
R3110 1K
Q3102 HN1C01FU/G/-X
L3101
22µ
C3101 10/6.3
R3112 1K
Q3103 HN1C01FUFU/G/-X
C3120 330/4
R3114 56
D3102 MA8068
R3113 1K
Q3104 HN1A01FU/G/-X
R3115 1K
Q3105 HN1C01FU/G/-X
C3121 330/4
R3117 56
D3103 MA8068
R3116 1K
Q3106 HN1C01FU/G/-X
IC3101 HA118219F
R3101 1k
R3102 1k
R3103 1k
CLK
DATA
LOAD
Serial I/O
CGCTL
YGCTL
BLKP IN
SEC C-IN
C-IN
VOUT GND
Y-IN
WF4
WF5
WF6
WF8
WF7
WF3
WF1
WF2
C3115 0.01
C3114 0.01
C3113
C3112 4.7/6.3
C3109 0.01
C3103 10/6.3
C3108 0.01
1/2
BG
REC-C IN
FM GND
CR
6dB
C3106 0.1
C3107 0.01
REC-FM IN
D/A LPF
A/D LPF
G.EQ
P.EQ
LPF
2M LPF
FM Vcc
FM_AGC
TRAP
HPF
PB FM+C
REC-FM OUT
REC-C Buff
REC-C OUT
Au GND
Au Vcc
C3105 0.1
C3104 56p
Buff
GCTL
BLK
BPF
4.2M TRAP
SECAM
CLP
L3104 56µ
R3108 0Ω
C3117 24p
C3118 0.1
SEC FIL
VOUT VCC
C2030 4.7/6.3
VCA
PB
REC
EP ON
DET
SP ON
C2023 0.1
C2031 0.1
C2029 0.1
C2027 0.47
C2028
R2016 18K
C2024 0.0022
C2025 1/25
R2025 15K
R2022 330K
R2021 10K
C2021 0.01
R2023 82
C2022 15/6.3
R2029 10K
R2024 82K
C2026 0.001
C2010 0.1
C2009 22/6.3
L2002 100µ
L2001 100µ
C2001 22/6.3
R3132 0Ω
Q3113 OPEN
L3106 5.6µ
R3137 OPEN
R3138 OPEN
C3134 10P
C3136 OPEN
L3107 OPEN
C3135 220P
Q3114 OPEN
R3134 220
C3132 OPEN
R3136 OPEN
R3131 0Ω
R3135 0Ω
Y_GAIN
C_GAIN
V_ASP_CS
SO3
SCK3
FREQ_ADJ
V_PLS_ON
TO CPU (Page 4-5,6)
S_DET+
2FSC
V_REC_C
V_REC_F
V_PB_F
TO VTR DSP (Page 4-11)
V_PB_C
TO CAMERA DSP (Page 4-18)
V_PB_CU
V_REC_CU
V_REC_FM
RF_4.8V
TO PRE/REC (Page 4-13)
REG_3.2V
TO REG (Page 4-22)
GND
IC2001 TC74AC04FT
Vcc 6A 6Y 5A 5Y 4A 4Y
1A 1Y 2A 2Y 3A 3Y GND
CN7
AE+ [4]
AE- [5]
AH_PB [3]
AH_REC [2]
AH_GND [1]
TO A/C HEAD
L2003 47µ
R2006 1K
C2002 0.018
C2005 1
R2003 1K
C2003 330p
R2001 100K
L2051 1µ
R2027 1k
C2051 0.0068
C2052 0.0022
L2052 1µ
R2026 1k
Q2006 DTC144EE
Q2001 DTA114TE
R2002 3.3K
R2004 680
Q2008 PUMT1
R2005 2.7K
C2004 22/6.3
R2011 100
Q2007 PUMX1
R2012 100
R2075 47k
Q2071 2SC4617/QR/-X
R2072 6.8K
R2071 47K
Q2072 PUMX1
R2073 6.8K
C2072 0.0068
C2071 1
R2062 330K
C2073 330p
C2076 0.1
R2074 47K
R2076 47K
C2074 0.0033
Q2061 2SC4617/QR/-X
R2061 10K
C2062 0.1
R2063 100K
C2061 0.1
A_PB
A_BIAS
SH_L
A_MUTE
SPK_VOL
TO CPU (Page 4-5,6)
Y
C
Y+C

NOTES : 1. For VTR ASP waveforms, please refer to page 4-57.
2. COMPARISION CHART OF MODELS & MARKS (#).

REF. No. / MODELS	Q2061	R2061 ~ R2063	C2023 C2061 C2062
GR-SXM26	OPEN	OPEN	OPEN
GR-SXM46	USED	USED	USED

4.8 CAMERA DSP SCHEMATIC DIAGRAM

NOTE: When ordering parts, be sure to order according to the Part Number indicated in the Parts List.

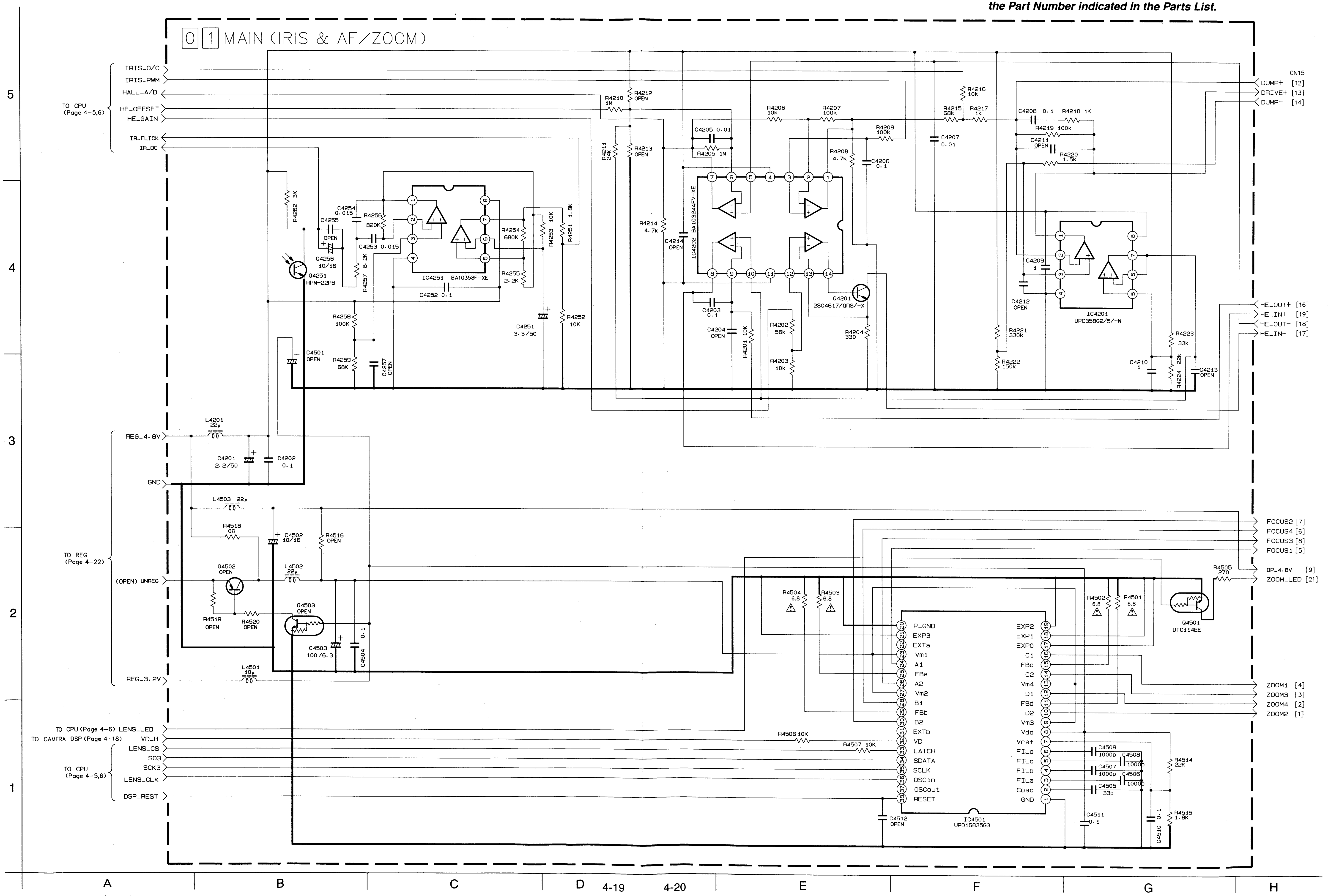

0 1 MAIN (CAMERA DSP)
IC5201
HD49326F
CDS+AGC+A/D
IC5202
JCY0098
TG+V_DRIVER
IC4001
JCY0100
CAMERA_DSP
TG
ADC
VRAM
DAC
OSD
CPU
DSC
DECK
IC4002 MSM548331TA
FIELD_MEMORY
IC4005
TC7S04FU
IC4003
UPD6462GS-914-X
IC4004
MM1385NN
WF1
WF2
WF3
WF4
Q4001 PUMT1
Q4002 PUMT1
Q4004 2PA1774/R/-X
CN22
TO CCD (Page 4-24)
TO REG (Page 4-22)
TO VTR DSP (Page 4-11)
VTR_ASP
TO VTR ASP (Page 4-15)
LCD
DECK
TO VTR DSP (Page 4-12)
DSC
(OPEN)
CPU
TO CPU, IRIS & AF/ZOOM (Page 5,6,19)
5
4
3
2
1
A
B
C
D
E
F
G
H

NOTES : 1. For CAMERA DSP waveforms, please refer to page 4–57.
2. COMPARISION CHART OF MODELS & MARKS (#).

REF. No. / MODELS	IC4002	C4040 C4041 C4043	L4004
GR–SXM26	OPEN	OPEN	OPEN
GR–SXM46	USED	USED	USED

4.9 IRIS & AF/ZOOM SCHEMATIC DIAGRAM

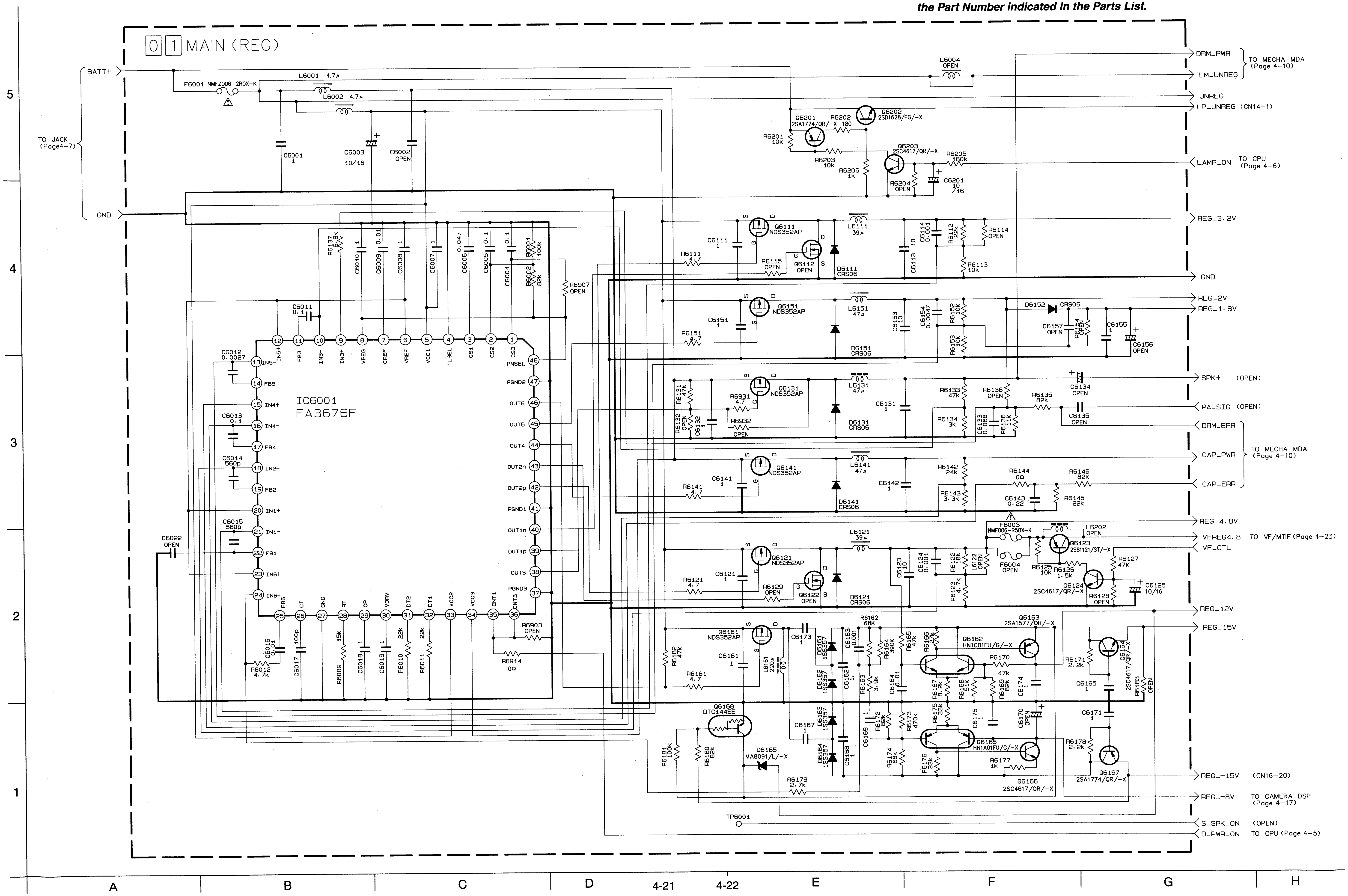
NOTE: When ordering parts, be sure to order according to the Part Number indicated in the Parts List.



01 MAIN (IRIS & AF/ZOOM)
TO CPU (Page 4-5,6)
IRIS_O/C
IRIS_PWM
HALL_A/D
HE_OFFSET
HE_GAIN
IR_FLICK
IR_DC
CN15
DUMP+ [12]
DRIVE+ [13]
DUMP- [14]
HE_OUT+ [16]
HE_IN+ [19]
HE_OUT- [18]
HE_IN- [17]
IC4251 BA10358F-XE
IC4202 BA10324AFV-XE
IC4201 UPC358G2/5/-W
Q4251 RPM-22PB
Q4201 2SC4617/QRS/-X
R4262 3K
C4254 0.015
R4256 820K
C4255 OPEN
C4256 10/16
C4253 0.015
R4257 8.2K
C4252 0.1
R4254 680K
R4253 10K
R4251 1.8K
R4255 2.2K
C4251 3.3/50
R4252 10K
R4258 100K
R4259 68K
C4257 OPEN
C4501 OPEN
R4210 1M
R4212 OPEN
R4211 24K
R4213 OPEN
R4214 4.7k
C4214 OPEN
C4205 0.01
R4205 1M
R4206 10k
R4207 100k
R4209 100k
R4208 4.7k
C4206 0.1
C4203 0.1
C4204 OPEN
R4201 10k
R4202 56k
R4203 10k
R4204 330
R4216 10k
R4215 68k
R4217 1k
C4207 0.01
C4208 0.1
R4218 1K
R4219 100k
C4211 OPEN
R4220 1.5k
C4209 1
C4212 OPEN
R4221 330k
R4222 150k
R4223 33k
R4224 22k
C4210 1
C4213 OPEN
TO REG (Page 4-22)
REG_4.8V
L4201 22μ
C4201 2.2/50
C4202 0.1
GND
L4503 22μ
R4518 0Ω
C4502 10/16
R4516 OPEN
(OPEN) UNREG
Q4502 OPEN
L4502 22μ
R4519 OPEN
R4520 OPEN
Q4503 OPEN
C4503 100/6.3
C4504 0.1
REG_3.2V
L4501 10μ
TO CPU (Page 4-6) LENS_LED
TO CAMERA DSP (Page 4-18) VD_H
TO CPU (Page 4-5,6)
LENS_CS
SO3
SCK3
LENS_CLK
DSP_REST
R4504 6.8
R4503 6.8
R4502 6.8
R4501 6.8
R4505 270
Q4501 DTC114EE
FOCUS2 [7]
FOCUS4 [6]
FOCUS3 [8]
FOCUS1 [5]
OP_4.8V [9]
ZOOM_LED [21]
ZOOM1 [4]
ZOOM3 [3]
ZOOM4 [2]
ZOOM2 [1]
IC4501 UPD16835G3
P_GND 20
EXP3 21
EXTa 22
Vm1 23
A1 24
FBa 25
A2 26
Vm2 27
B1 28
FBb 29
B2 30
EXTb 31
VD 32
LATCH 33
SDATA 34
SCLK 35
OSCin 36
OSCout 37
RESET 38
EXP2 19
EXP1 18
EXP0 17
C1 16
FBc 15
C2 14
Vm4 13
D1 12
FBd 11
D2 10
Vm3 9
Vdd 8
Vref 7
FILd 6
FILc 5
FILb 4
FILa 3
Cosc 2
GND 1
R4506 10K
R4507 10K
C4512 OPEN
C4509 1000p
C4508 1000p
C4507 1000p
C4506 1000p
C4505 33p
C4511 0.1
C4510 0.1
R4514 22K
R4515 1.8K
5
4
3
2
1
A
B
C
D
E
F
G
H

4.10 REGULATOR SCHEMATIC DIAGRAM

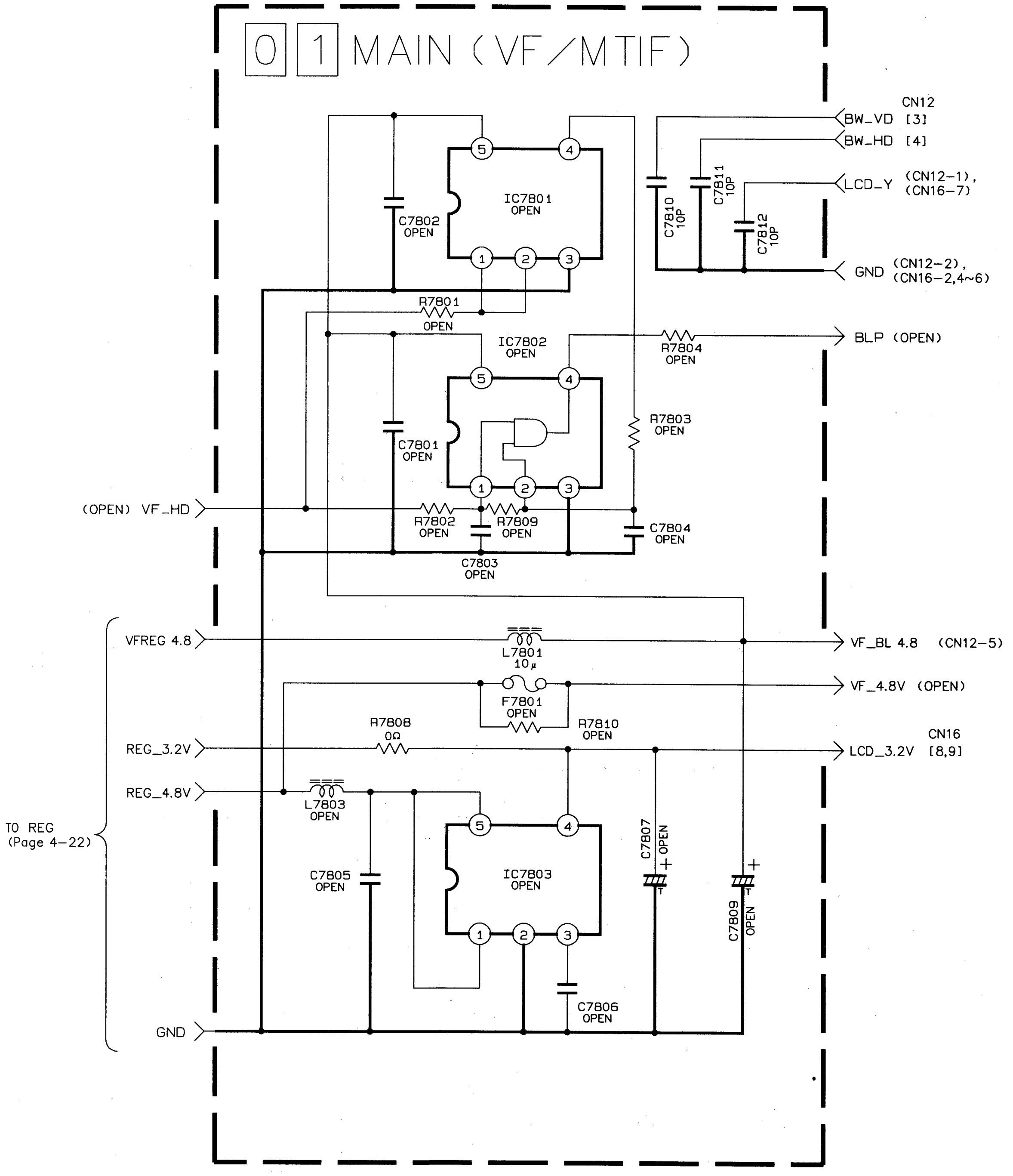
NOTE: When ordering parts, be sure to order according to the Part Number indicated in the Parts List.



01 MAIN (REG)
BATT+
TO JACK (Page4-7)
GND
F6001 NMFZ006-2R0X-K
L6001 4.7μ
L6002 4.7μ
C6001 1
C6003 10/16
C6002 OPEN
IC6001
FA3676F
C6011 0.1
C6012 0.0027
C6013 0.1
C6014 560p
C6015 560p
C6022 OPEN
R6137 6.8k
C6010 1
C6009 0.01
C6008 1
C6007 1
C6006 0.047
C6005 0.1
C6004 0.1
R6001 100k
R6002 82k
R6907 OPEN
IN5+
FB3
IN3-
IN3+
VREG
CREF
VREF
VCC1
TLSEL
CS1
CS2
CS3
PNSEL
IN5-
FB5
IN4+
IN4-
FB4
IN2-
FB2
IN1+
IN1-
FB1
IN6+
IN6-
PGND2
OUT6
OUT5
OUT4
OUT2n
OUT2p
PGND1
OUT1n
OUT1p
OUT3
PGND3
FB6
CT
GND
RT
CP
VDRV
DT2
DT1
VCC2
VCC3
CNT1
CNT3
C6016 0.01
R6012 4.7k
C6017 100p
R6009 15k
C6018 1
C6019 1
R6010 22k
R6011 22k
R6903 OPEN
R6914 0Ω
L6004 OPEN
DRM_PWR
LM_UNREG
TO MECHA MDA (Page 4-10)
UNREG
LP_UNREG (CN14-1)
Q6201 2SA1774/QR/-X
R6202 180
Q6202 2SD1628/FG/-X
R6201 10k
Q6203 2SC4617/QR/-X
R6203 10k
R6206 1k
R6204 OPEN
R6205 180k
C6201 10/16
LAMP_ON
TO CPU (Page 4-6)
Q6111 NDS352AP
L6111 39μ
C6111 1
R6111 4.7
R6115 OPEN
Q6112 OPEN
D5111 CRS06
C6113 10
C6114 0.001
R6112 22k
R6114 OPEN
R6113 10k
REG_3.2V
GND
Q6151 NDS352AP
L6151 47μ
C6151 1
R6151 4.7
D6151 CRS06
C6153 10
C6154 0.0047
R6152 10k
R6153 10k
D6152 CRS06
C6157 OPEN
R6154 OPEN
C6155 1
C6156 OPEN
REG_2V
REG_1.8V
Q6131 NDS352AP
L6131 47μ
R6131 47k
R6132 OPEN
C6132 1
R6931 4.7
R6932 OPEN
D6131 CRS06
C6131 1
R6133 47k
R6134 3k
R6138 OPEN
C6133 0.068
R6136 11k
R6135 82k
C6134 OPEN
C6135 OPEN
SPK+ (OPEN)
PA_SIG (OPEN)
DRM_ERR
CAP_PWR
CAP_ERR
TO MECHA MDA (Page 4-10)
Q6141 NDS352AP
L6141 47μ
C6141 1
R6141 4.7
D6141 CRS06
C6142 1
R6142 24k
R6143 3.3k
R6144 0Ω
C6143 0.22
R6146 82k
R6145 22k
REG_4.8V
F6003 NMF006-R50X-K
L6202 OPEN
Q6123 2SB1121/ST/-X
VFREG4.8
TO VF/MTIF (Page 4-23)
VF_CTL
Q6121 NDS352AP
L6121 39μ
C6121 1
R6121 4.7
R6129 OPEN
Q6122 OPEN
D6121 CRS06
C6123 10
C6124 0.001
R6122 18k
L6122 OPEN
R6123 4.7k
F6004 OPEN
R6125 10k
R6126 1.5k
R6127 47k
Q6124 2SC4617/QR/-X
R6128 OPEN
C6125 10/16
REG_12V
REG_15V
Q6161 NDS352AP
C6161 1
R6161 4.7
R6182 47k
L6161 220μ
C6173 1
D6161 1SS357
D6162 1SS357
D6163 1SS357
D6164 1SS357
C6162 1
C6163 0.001
R6162 68K
R6163 3.9k
R6164 390K
C6164 0.01
R6165 47k
R6166 47k
Q6162 HN1C01FU/G/-X
R6170 47k
Q6163 2SA1577/QR/-X
R6167 8.2k
R6168 51k
R6169 82k
C6174 1
R6171 2.2k
Q6164 2SC4617/QR/-X
C6165 1
R6183 OPEN
Q6168 DTC144EE
C6167 1
C6168 1
C6169 1
R6172 82k
R6173 470k
R6175 33k
C6175 1
C6170 OPEN
C6171 1
D6165 MA8091/L/-X
R6181 100k
R6180 82k
R6174 68k
R6176 33k
Q6165 HN1A01FU/G/-X
R6177 1k
Q6166 2SC4617/QR/-X
R6178 2.2k
Q6167 2SA1774/QR/-X
R6179 2.7k
REG_-15V (CN16-20)
REG_-8V
TO CAMERA DSP (Page 4-17)
TP6001
S_SPK_ON (OPEN)
D_PWR_ON
TO CPU (Page 4-5)
1
2
3
4
5
A
B
C
D
E
F
G
H

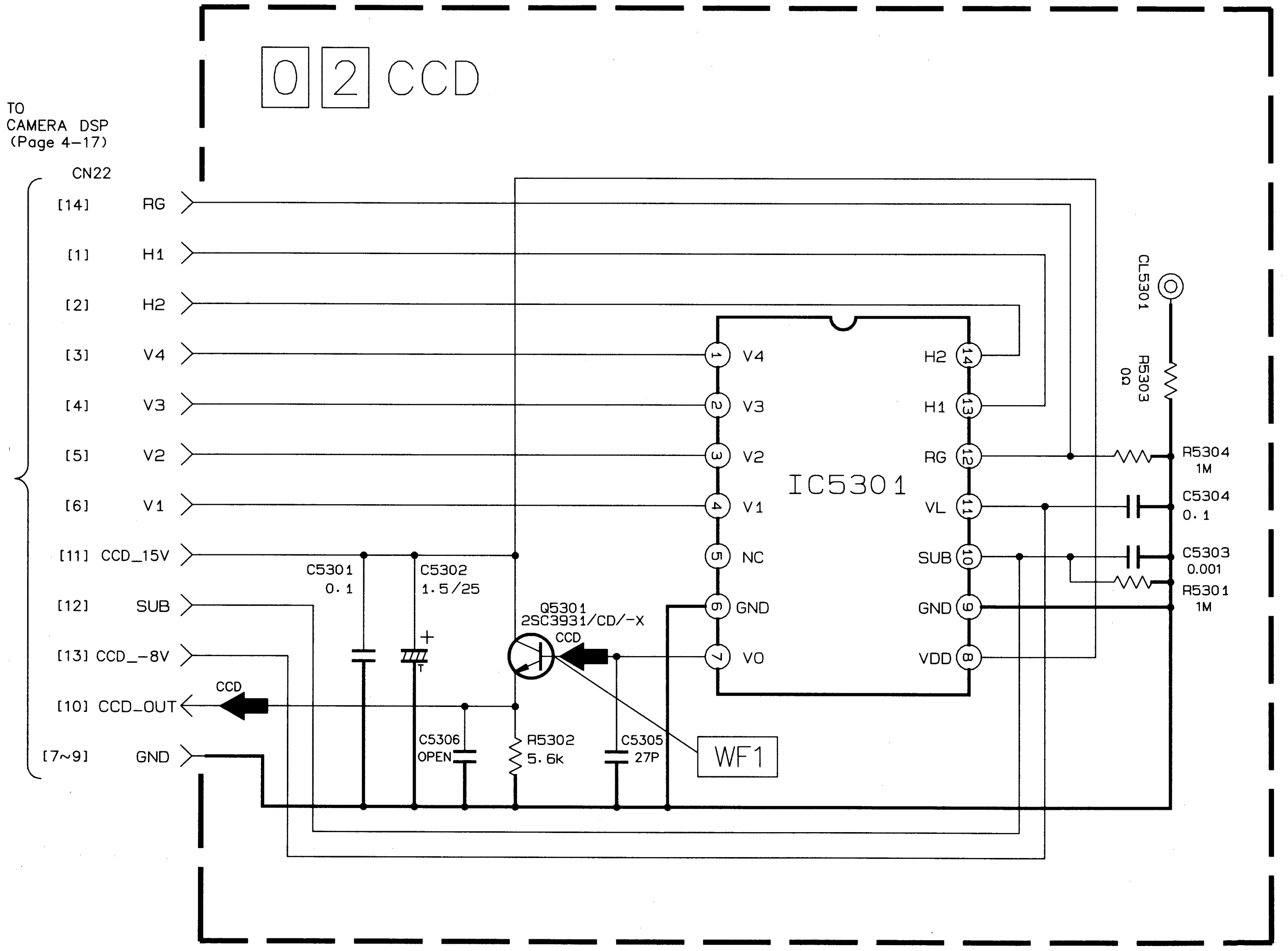
4.11 VF/MTIF AND CCD SCHEMATIC DIAGRAMS

NOTE: ***When ordering parts, be sure to order according to the Part Number indicated in the Parts List.***



0 1 MAIN (VF/MTIF)
CN12
BW_VD [3]
BW_HD [4]
LCD_Y (CN12-1), (CN16-7)
GND (CN12-2), (CN16-2,4~6)
IC7801 OPEN
C7802 OPEN
C7810 10P
C7811 10P
C7812 10P
R7801 OPEN
IC7802 OPEN
R7804 OPEN
BLP (OPEN)
C7801 OPEN
R7803 OPEN
(OPEN) VF_HD
R7802 OPEN
R7809 OPEN
C7804 OPEN
C7803 OPEN
VFREG 4.8
L7801 10μ
VF_BL 4.8 (CN12-5)
F7801 OPEN
VF_4.8V (OPEN)
R7808 0Ω
R7810 OPEN
REG_3.2V
CN16
LCD_3.2V [8,9]
REG_4.8V
L7803 OPEN
TO REG (Page 4-22)
C7805 OPEN
IC7803 OPEN
C7807 OPEN
C7809 OPEN
C7806 OPEN
GND

Note: *IC5301 is incorporated in the CCD base assembly. When IC5301 needs replacement, replace the CCD base assembly in whole because it cannot be replaced alone.*

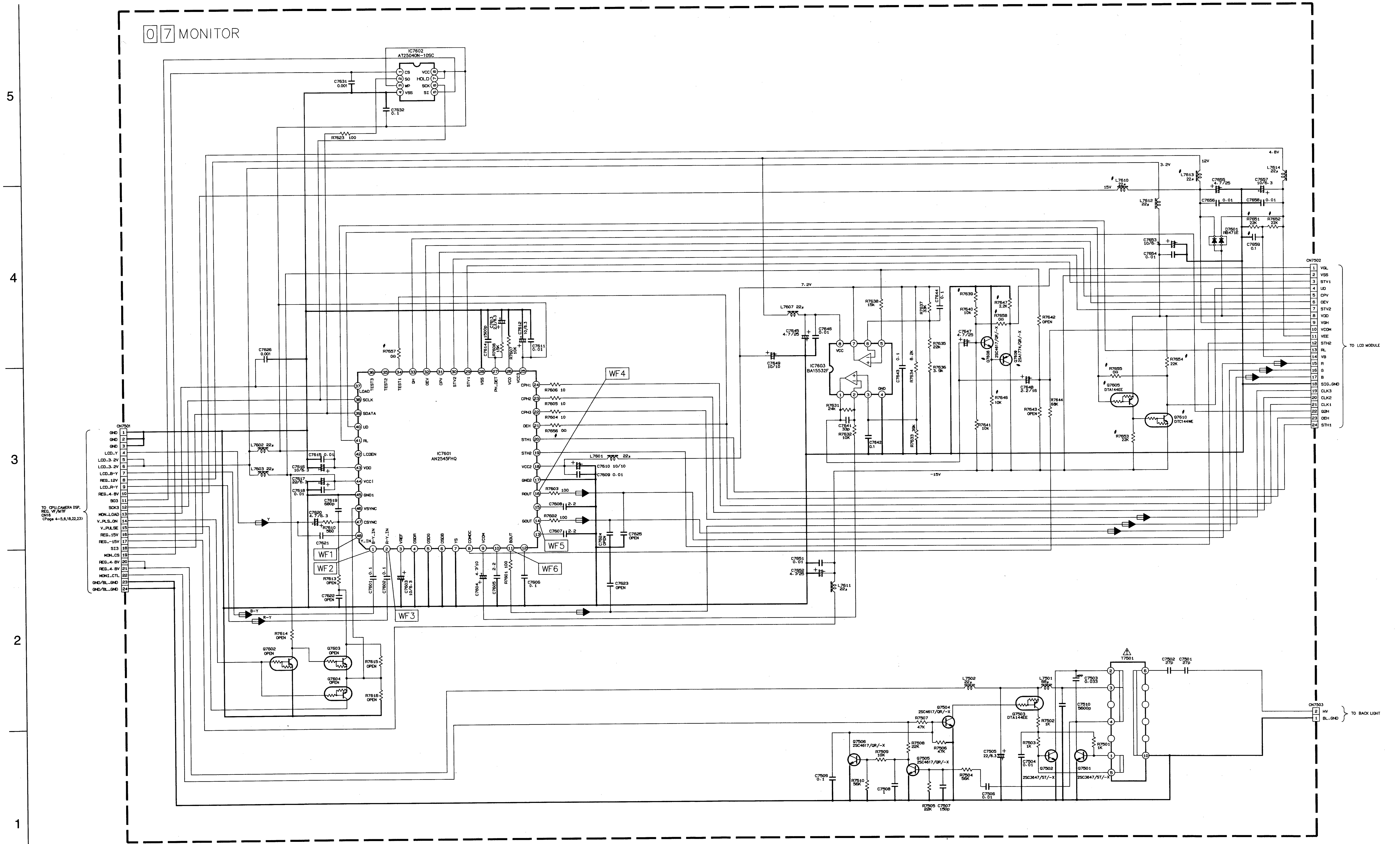


0 2 CCD
TO CAMERA DSP (Page 4-17)
CN22
[14] RG
[1] H1
[2] H2
[3] V4
[4] V3
[5] V2
[6] V1
[11] CCD_15V
[12] SUB
[13] CCD_-8V
[10] CCD_OUT
[7~9] GND
CCD
C5301 0.1
C5302 1.5/25
Q5301 2SC3931/CD/-X
CCD
C5306 OPEN
R5302 5.6k
C5305 27P
WF1
IC5301
1 V4
2 V3
3 V2
4 V1
5 NC
6 GND
7 VO
14 H2
13 H1
12 RG
11 VL
10 SUB
9 GND
8 VDD
CL5301
R5303 0Ω
R5304 1M
C5304 0.1
C5303 0.001
R5301 1M

NOTE : For CCD waveform, please refer to page 4-57.

4.12 MONITOR SCHEMATIC DIAGRAM

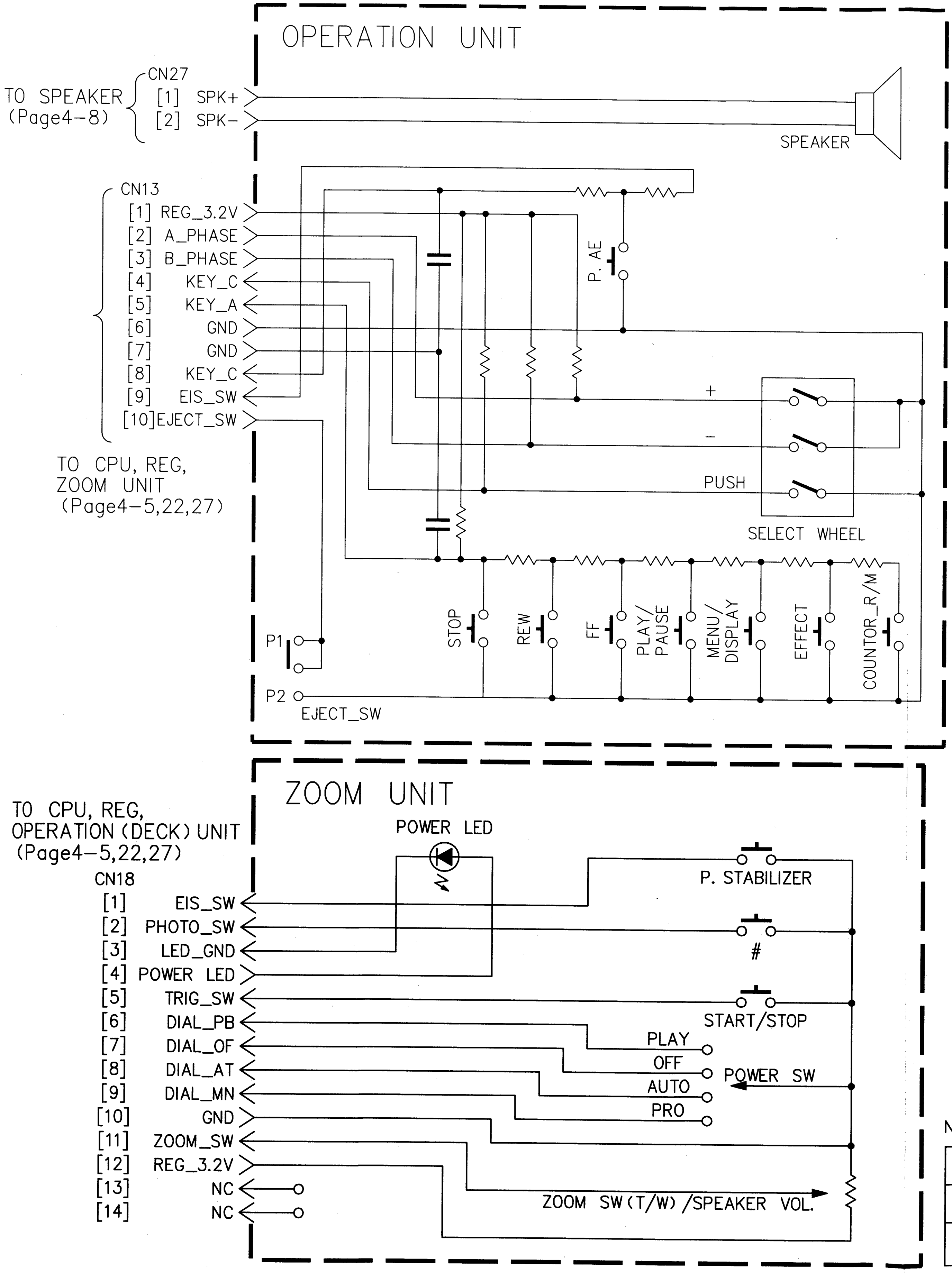
NOTE:* *When ordering parts, be sure to order according to the Part Number indicated in the Parts List.


07 MONITOR
IC7602 AT25040N-10SC
CS
SO
WP
VSS
VCC
HOLD
SCK
SI
C7631 0.001
C7632 0.1
R7623 100
IC7601 AN2545FHQ
LOAD
SCLK
SDATA
UD
RL
LCDEN
VDD
VCC1
GND1
VSYNC
CSYNC
Y_IN
B-Y_IN
R-Y_IN
VREF
OSDR
OSDG
OSDB
YS
COMDC
VCOM
BOUT
GOUT
ROUT
GND2
VCC2
STH2
STH1
OEH
CPH3
CPH2
CPH1
VCC3
VCO
PH_DET
VSS
STV1
STV2
CPV
OEV
QH
TEST1
TEST2
TEST3
WF1
WF2
WF3
WF4
WF5
WF6
R7657 0Ω
R7606 10
R7605 10
R7604 10
R7656 0Ω
R7603 100
R7602 100
R7601 100
R7607 10K
R7608 15K
R7610 560
R7613 OPEN
C7601 0.1
C7602 0.1
C7603 10/6.3
C7604 4.7/10
C7605 2.2
C7606 0.1
C7607 2.2
C7608 2.2
C7609 0.01
C7610 10/10
C7611 0.01
C7612 10/6.3
C7613 22/6.3
C7614 1500p
C7615 0.01
C7616 10/6.3
C7617 22/6.3
C7618 0.01
C7619 680p
C7620 4.7/6.3
C7621 1
C7622 OPEN
C7623 OPEN
C7624 OPEN
C7625 OPEN
C7626 0.001
L7601 22μ
L7602 22μ
L7603 22μ
L7607 22μ
IC7603 BA15532F
7.2V
-15V
15V
12V
3.2V
4.8V
L7610 22μ
L7611 22μ
L7612 22μ
L7613 22μ
L7614 22μ
D7601 RB471E
Q7605 DTA144EE
Q7610 DTC144WE
Q7608 2SC4617/QR/-X
Q7609 2SA1774/QR/-X
R7655 0Ω
R7654 22K
R7653 22K
R7651 22K
R7652 22K
Q7602 OPEN
Q7603 OPEN
Q7604 OPEN
R7614 OPEN
R7615 OPEN
R7616 OPEN
Y
B-Y
R-Y
CN7501
GND
GND
GND
LCD_Y
LCD_3.2V
LCD_3.2V
LCD_B-Y
REG_12V
LCD_R-Y
REG_4.8V
SO3
SCK3
MON_LOAD
V_PLS_ON
V_PULSE
REG_15V
REG_-15V
SI3
MON_CS
REG_4.8V
REG_4.8V
MONI_CTL
GND/BL_GND
GND/BL_GND
TO CPU,CAMERA DSP, REG, VF/MTIF CN16 (Page 4-5,8,18,22,23)
CN7502
VGL
VSS
STV1
UD
CPV
OEV
STV2
VDD
VGH
VCOM
VEE
STH2
RL
VB
R
G
B
SIG_GND
CLK3
CLK2
CLK1
Q2H
OEH
STH1
TO LCD MODULE
T7501
C7502 27p
C7501 27p
L7501
L7502 22μ
C7503 0.033
C7510 5600p
Q7503 DTA144EE
Q7504 2SC4617/QR/-X
Q7505 2SC4617/QR/-X
Q7506 2SC4617/QR/-X
Q7501 2SC3647/ST/-X
Q7502 2SC3647/ST/-X
R7501 1K
R7502 1K
R7503 1K
R7504 56K
R7505 22K
R7506 47K
R7507 47K
R7508 22K
R7509 10K
R7510 56K
C7504 0.01
C7505 22/6.3
C7506 0.01
C7507 150p
C7508 1
C7509 0.1
CN7503
HV
BL_GND
TO BACK LIGHT
1
2
3
4
5
A
B
C
D
E
F
G
H

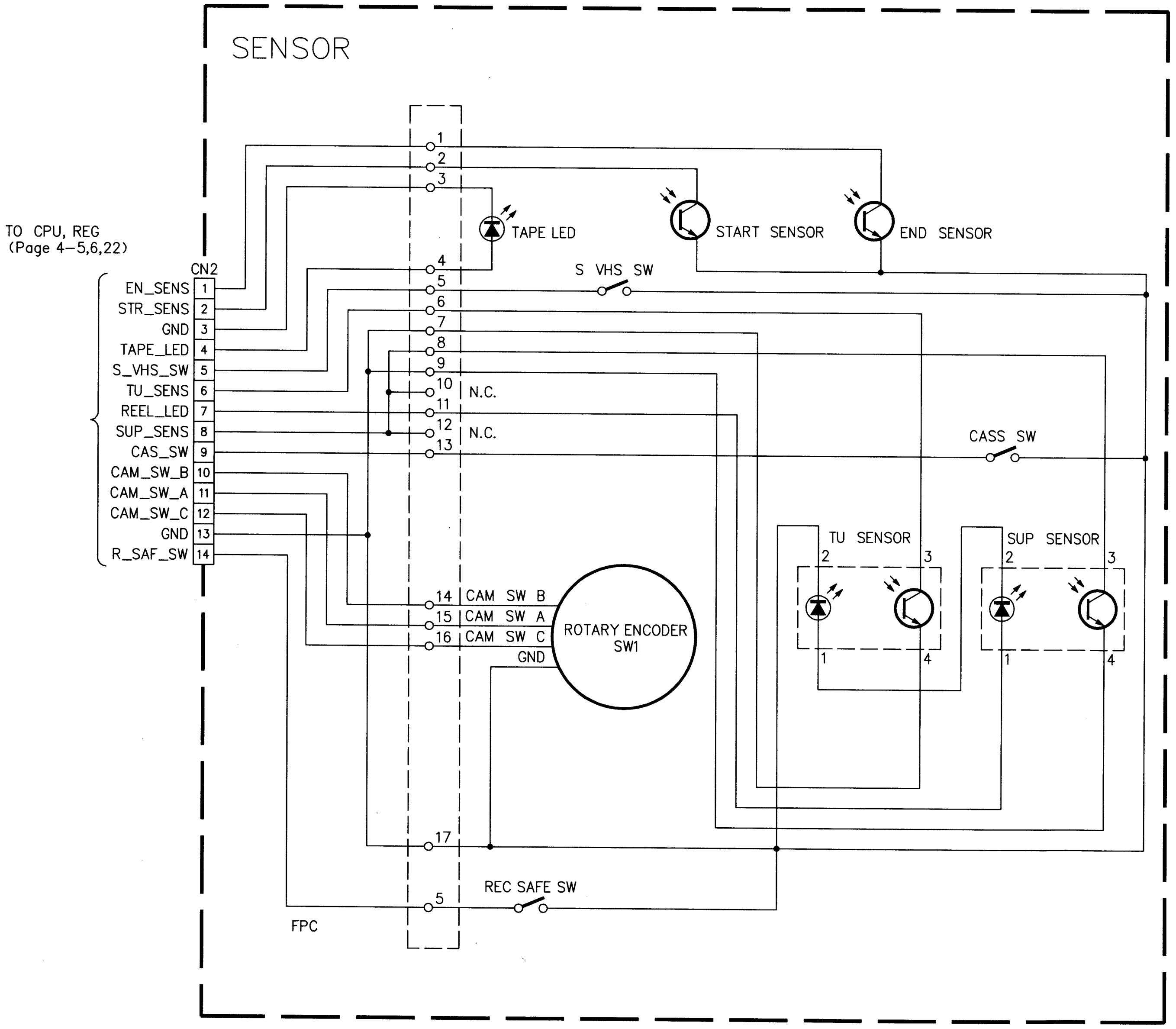
NOTES : 1. For MONITOR waveforms, please refer to page 4–57.
2. COMPARISION CHART OF MODELS & MARKS (#).

REF. No. / MODELS	Q7605	Q7608 Q7609	Q7610	R7639	R7646 R7647	R7651 ~ R7654	R7655	R7656	R7657	R7658	C7659	L7610	L7613
GR-SXM26	OPEN	USED	OPEN	10K	USED	OPEN	USED	OPEN	USED	OPEN	OPEN	USED	OPEN
GR-SXM46	USED	OPEN	USED	4.7K	OPEN	USED	OPEN	USED	OPEN	USED	USED	OPEN	USED

4.13 OPERATION UNIT, ZOOM UNIT AND SENSOR SCHEMATIC DIAGRAMS


OPERATION UNIT
TO SPEAKER (Page4–8)
CN27
[1] SPK+
[2] SPK–
SPEAKER
CN13
[1] REG_3.2V
[2] A_PHASE
[3] B_PHASE
[4] KEY_C
[5] KEY_A
[6] GND
[7] GND
[8] KEY_C
[9] EIS_SW
[10]EJECT_SW
TO CPU, REG, ZOOM UNIT (Page4–5,22,27)
P. AE
+
–
PUSH
SELECT WHEEL
STOP
REW
FF
PLAY/PAUSE
MENU/DISPLAY
EFFECT
COUNTOR_R/M
P1
P2
EJECT_SW
ZOOM UNIT
POWER LED
TO CPU, REG, OPERATION (DECK) UNIT (Page4–5,22,27)
CN18
[1] EIS_SW
[2] PHOTO_SW
[3] LED_GND
[4] POWER LED
[5] TRIG_SW
[6] DIAL_PB
[7] DIAL_OF
[8] DIAL_AT
[9] DIAL_MN
[10] GND
[11] ZOOM_SW
[12] REG_3.2V
[13] NC
[14] NC
P. STABILIZER
#
START/STOP
PLAY
OFF
AUTO
PRO
POWER SW
ZOOM SW (T/W) /SPEAKER VOL.

NOTE: The schematic diagrams are only for reference.
Avoid replacing individual parts.
Replace the entire unit only.

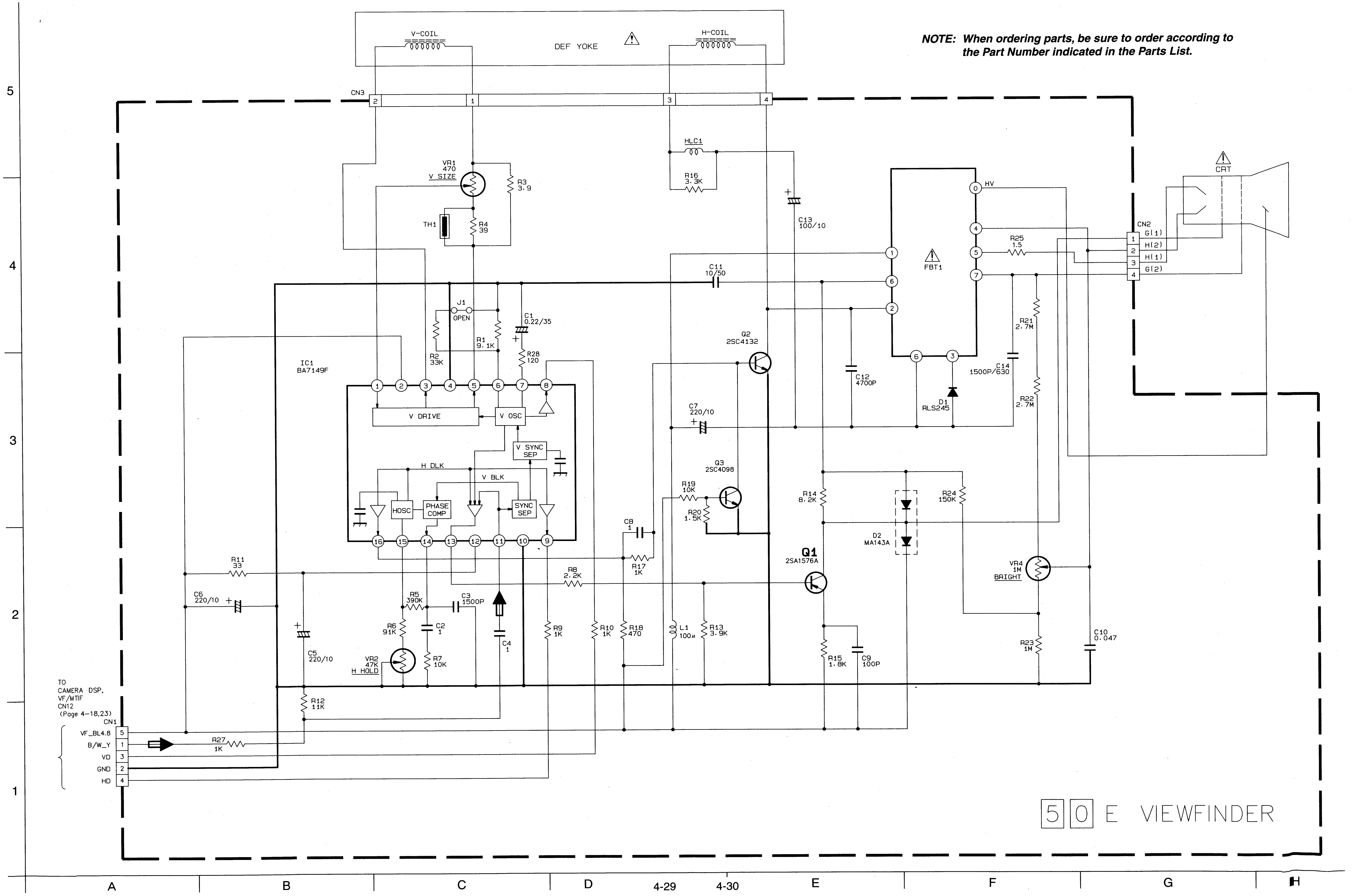

SENSOR
TO CPU, REG (Page 4–5,6,22)
CN2
EN_SENS 1
STR_SENS 2
GND 3
TAPE_LED 4
S_VHS_SW 5
TU_SENS 6
REEL_LED 7
SUP_SENS 8
CAS_SW 9
CAM_SW_B 10
CAM_SW_A 11
CAM_SW_C 12
GND 13
R_SAF_SW 14
1
2
3
4
5
6
7
8
9
10
11
12
13
N.C.
N.C.
TAPE LED
START SENSOR
END SENSOR
S VHS SW
CASS SW
TU SENSOR
SUP SENSOR
14 CAM SW B
15 CAM SW A
16 CAM SW C
GND
ROTARY ENCODER SW1
17
5
REC SAFE SW
FPC

NOTE: COMPARISON CHART OF MODELS & MARKS(#).

MODELS	FUNCTION
GR–SXM26	5 SEC REC
GR–SXM46	SNAP SHOT

4.14 ELECTRONIC VIEWFINDER SCHEMATIC DIAGRAM

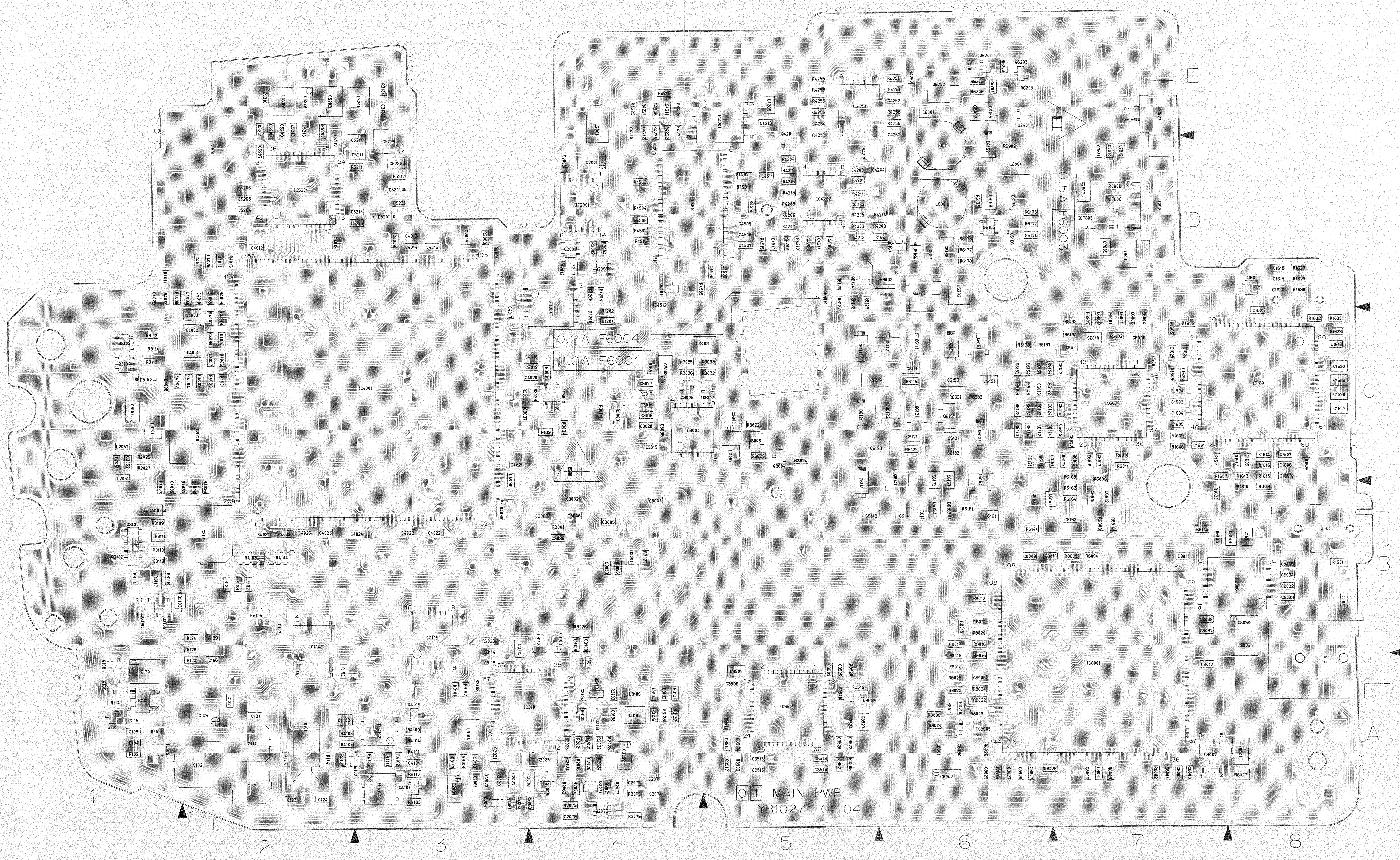
NOTE: When ordering parts, be sure to order according to the Part Number indicated in the Parts List.



5
4
3
2
1
A
B
C
D
E
F
G
H
DEF YOKE
V-COIL
H-COIL
CN3
VR1 470 V SIZE
R3 3.9
TH1
R4 39
HLC1
R16 3.3K
C13 100/10
HV
FBT1
CRT
CN2
G(1)
H(2)
H(1)
G(2)
R25 1.5
C11 10/50
J1 OPEN
C1 0.22/35
R1 9.1K
R2 33K
R28 120
IC1 BA7149F
V DRIVE
V OSC
V SYNC SEP
H DLK
V BLK
HOSC
PHASE COMP
SYNC SEP
Q2 2SC4132
C12 4700P
D1 RLS245
C14 1500P/630
R21 2.7M
R22 2.7M
C7 220/10
Q3 2SC4098
R19 10K
R20 1.5K
R14 8.2K
R24 150K
D2 MA143A
C8 1
R17 1K
R8 2.2K
Q1 2SA1576A
VR4 1M BRIGHT
R11 33
C6 220/10
R5 390K
C3 1500P
R6 91K
C2 1
VR2 47K H HOLD
R7 10K
C4 1
C5 220/10
R9 1K
R10 1K
R18 470
L1 100µ
R13 3.9K
R15 1.8K
C9 100P
R23 1M
C10 0.047
R12 11K
R27 1K
TO CAMERA DSP, VF/MTIF CN12 (Page 4-18,23)
CN1
VF_BL4.8
B/W_Y
VD
GND
HD
50 E VIEWFINDER

4.15 MAIN CIRCUIT BOARD

FOIL SIDE (B)


0.2A F6004
2.0A F6001
0.5A F6003
F
01 MAIN PWB
YB10271-01-04
IC4001
IC5201
IC2001
IC4501
IC4251
IC4202
IC3004
IC1601
IC6001
IC6008
IC8001
IC3101
IC3501
IC104
IC105
E
D
C
B
A
1
2
3
4
5
6
7
8

COMPONENT PARTS LOCATION GUIDE (MAIN)

REF.No.	LOCATION		
CAPACITOR			
C101	A	C	1A
C102	B	C	2A
C103	B	C	2A
C104	B	C	1A
C105	B	C	1A
C106	B	C	2A
C107	B	C	2B
C108	A	C	1C
C109	A	C	3D
C110	A	C	3D
C111	B	C	2A
C112	B	C	2A
C113	A	C	2A
C114	A	C	2A
C115	B	C	1A
C116	A	C	8C
C118	A	C	2A
C119	A	C	3A
C120	A	C	3A
C121	B	C	2A
C122	B	C	2A
C123	B	C	2A
C124	B	C	2A
C125	A	C	1A
C126	A	C	1A
C127	A	C	3A
C128	A	C	2A
C129	A	C	3A
C130	B	C	1A
C131	A	C	3A
C132	A	C	3B
C133	A	C	2C
C134	A	C	2C
C135	A	C	2B
C136	A	C	2B
C137	A	C	4B
C138	A	C	1B
C140	A	C	2B
C143	A	C	2B
C144	A	C	7B
C146	A	C	4E
C147	A	C	4E
C1201	A	C	4D
C1202	A	C	4D
C1203	A	C	4D
C1204	B	C	4C
C1205	A	C	4D
C1206	A	C	4D
C1207	A	C	4D
C1601	B	C	8C
C1602	A	C	7D
C1603	B	C	7C
C1604	B	C	7C
C1605	B	C	7C
C1606	B	C	8C
C1607	B	C	8C
C1608	B	C	8C
C1609	B	C	8C
C1610	B	C	8B
C1611	A	C	7C
C1612	A	C	8C
C1613	A	C	7C
C1614	A	C	8C
C1615	A	C	7C
C1616	B	C	8C
C1617	A	C	7C
C1618	B	C	8D
C1619	B	C	8D
C1620	B	C	8D
C1621	A	C	8C
C1622	A	C	8C
C1623	A	C	7C
C1624	B	C	7C
C1625	B	C	7C
C1626	B	C	7C
C1627	B	C	8C
C1628	B	C	8C
C1629	B	C	8C
C1630	B	C	8C
C1631	B	C	7C
C1801	B	C	2D
C2001	B	C	4D
C2002	A	C	4D
C2003	B	C	4D
C2004	A	C	4D
C2005	B	C	3D
C2009	A	C	4A
C2010	A	C	4A
C2021	B	C	4A
C2022	B	C	4A
C2023	B	C	3A
C2024	B	C	4A
C2025	B	C	4A
C2026	B	C	4A
C2027	B	C	3A
C2028	B	C	4A
C2029	B	C	3A
C2030	B	C	3A
C2031	B	C	3A
C2051	B	C	1C
C2052	B	C	1C
C2061	B	C	3A
C2062	B	C	3A
C2071	B	C	4A
C2072	B	C	4A
C2073	A	C	4A
C2074	B	C	4A
C2076	B	C	4A
C2401	A	C	6D
C2402	A	C	6E
C2403	A	C	7E
C2404	A	C	7E
C2405	A	C	7D
C3002	B	C	5C
C3003	B	C	4C
C3004	B	C	4B
C3005	B	C	4B
C3006	B	C	4B
C3007	B	C	4B
C3008	A	C	3C
C3009	A	C	4D
C3010	A	C	4C
C3011	A	C	4C
C3012	A	C	5C
C3013	A	C	4C
C3014	A	C	4C
C3015	A	C	5C
C3016	A	C	4C
C3017	A	C	4C
C3018	A	C	5C
C3019	B	C	4C
C3020	A	C	4C
C3021	A	C	5C
C3022	A	C	5C
C3023	A	C	4C
C3024	A	C	4C
C3027	B	C	4C
C3028	B	C	4C
C3031	A	C	4D
C3032	B	C	4B
C3033	B	C	4B
C3035	B	C	4B
C3037	B	C	3C
C3038	B	C	4C
C3101	B	C	1C
C3103	B	C	4B
C3104	B	C	4A
C3105	A	C	4A
C3106	A	C	4A
C3107	B	C	4A
C3108	B	C	4B
C3109	B	C	4B
C3112	B	C	4B
C3113	B	C	3B
C3114	B	C	3B
C3115	B	C	3A
C3117	B	C	3A
C3118	B	C	3A
C3119	B	C	1B
C3120	B	C	2C
C3121	B	C	2B
C3132	B	C	4A
C3134	B	C	4A
C3135	B	C	3E
C3136	B	C	4A
C3501	A	C	5A
C3502	A	C	5A
C3503	B	C	5A
C3504	A	C	5A
C3505	A	C	5A
C3506	B	C	5A
C3507	B	C	5A
C3508	A	C	5A
C3509	A	C	5A
C3510	B	C	5A
C3511	B	C	5A
C3512	B	C	5A
C3513	B	C	5A
C3514	A	C	5A
C3515	B	C	5A
C3516	B	C	5A
C3517	A	C	5A
C3518	B	C	5A
C3519	B	C	5A
C3520	B	C	5A
C3521	B	C	5A
C3522	A	C	5A
C3523	B	C	5A
C3524	B	C	5A
C3525	B	C	5A
C3526	A	C	5A
C3527	B	C	5A
C3901	A	C	6A
C4001	B	C	2C
C4002	B	C	2C
C4003	B	C	2C
C4004	A	C	3C
C4005	A	C	3C
C4006	B	C	2B
C4007	B	C	1B
C4008	B	C	1C
C4009	B	C	2C
C4010	B	C	2D
C4011	B	C	2D
C4012	B	C	2D
C4013	B	C	2D
C4014	B	C	3D
C4015	B	C	3D
C4016	B	C	3D
C4017	B	C	3D
C4018	B	C	4C
C4019	B	C	4C
C4020	B	C	4C
C4021	B	C	3C
C4022	B	C	3B
C4023	B	C	3B
C4024	B	C	3B
C4025	B	C	2B
C4026	B	C	2B
C4028	B	C	2D
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C4051	A	C	2C
C4055	B	C	2D
C4101	B	C	3A
C4102	B	C	2A
C4201	A	C	5D
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C4203	B	C	5D
C4204	B	C	6D
C4205	B	C	5D
C4206	B	C	5D
C4207	B	C	5D
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C4213	B	C	5E
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C6143	B	C	8B
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C6157	B	C	6C
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C6162	B	C	6B
C6163	B	C	7B
C6164	A	C	6C
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C6169	B	C	6D
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C6171	B	C	6D
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C6175	B	C	6D
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C7807	B	C	7D
C7809	A	C	7E
C7810	B	C	7D
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C8012	B	C	7A
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C8040	B	C	6A
C8041	A	C	7B
C8042	A	C	7A
C8043	A	C	8A
C8044	A	C	8B
CONNECTOR			
CN1	A	C	4A
CN2	A	C	8A
CN3	A	C	4D
CN4	A	C	2A
CN5	A	C	5A
CN7	A	C	3D
CN8	A	C	4A
CN11	A	C	7D
CN12	B	C	7D
CN13	A	C	8C
CN14	A	C	2A
CN15	A	C	4D
CN16	A	C	7E
CN18	A	C	4E
CN22	A	C	3D
CN25	A	C	3C
CN26	A	C	3C
CN27	B	C	7E
DIODE			
D101	A	C	1A
D102	A	C	1B
D103	A	C	1B
D105	A	C	7A
D106	A	C	7A
D107	A	C	3C
D501	A	C	8B
D502	A	C	8B
D503	A	C	8B
D504	A	C	8B
D505	A	C	8B
D506	A	C	8B
D1601	B	C	8D
D3001	B	C	4B
D3002	B	C	5C
D3101	B	C	1B
D3102	B	C	1C
D3103	B	C	1B
D4001	A	C	2C
D4002	A	C	2C
D5201	B	C	3D
D5202	B	C	3D
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D6121	B	C	5C
D6131	B	C	6C
D6141	B	C	5C
D6151	B	C	6C
D6152	B	C	6D
D6161	B	C	7B
D6162	B	C	6B
D6163	B	C	6B
D6164	B	C	6D
D6165	A	C	7C
IC			
IC101	A	C	2B
IC102	A	C	2A
IC103	B	C	1A
IC104	B	C	2B
IC105	B	C	3B
IC106	B	C	1A
IC107	A	C	1A
IC1201	B	C	4D
IC1601	B	C	8C
IC1801	A	D	2D
IC2001	B	C	4D
IC2401	A	C	6E
IC3001	A	C	4C
IC3002	A	C	4B
IC3003	B	C	4C
IC3004	B	C	4C
IC3101	B	C	4A
IC3501	B	C	5A
IC3901	A	C	5A
IC4001	B	C	3C
IC4002	A	C	2C
IC4003	A	C	2C
IC4004	A	C	2C
IC4005	A	C	2C
IC4201	B	C	5E
IC4202	B	C	5D
IC4251	B	C	5E
IC4501	B	C	4D
IC5201	B	C	2D
IC5202	A	C	2D
IC6001	B	C	7C
IC7801	A	C	7D
IC7802	A	C	7D
IC7803	B	C	7D
IC8001	B	C	7A
IC8002	A	C	7B
IC8003	A	C	6A
IC8004	A	C	7B
IC8005	B	C	6A
IC8006	B	C	8B
IC8007	B	C	7A
COIL			
L101	A	C	2A
L102	A	C	3D
L103	A	C	3D
L501	B	C	8B
L502	A	C	8B
L2001	B	C	4E
L2002	A	C	4A
L2003	A	C	4D
L2051	B	C	1C
L2052	B	C	1C
L2401	A	C	6E
L3002	B	C	5C
L3003	B	C	5C
L3101	B	C	1C
L3104	B	C	3A
L3106	B	C	4A
L3107	B	C	4A
L3501	A	C	5A
L3502	A	C	5A
L3901	A	C	6A
L4001	A	C	2C
L4002	A	C	2C
L4003	A	C	1C
L4004	A	C	2D
L4005	A	C	1C
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L4502	A	C	5E
L4503	A	C	5E
L5201	B	C	3E
L5202	B	C	2E
L5203	A	C	3E
L5204	A	C	2D
L6001	B	C	6D
L6002	B	C	6D
L6004	B	C	6D
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L6121	A	C	6C
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L7803	B	C	7D
L8001	B	C	6A
L8002	A	C	6A
L8003	A	C	6A
L8004	B	C	8B
TRANSISTOR			
Q101	A	C	1B
Q102	A	C	1B
Q103	A	C	3D
Q104	A	C	8A
Q105	A	C	8A
Q106	A	C	8A
Q107	A	C	8A
Q108	B	C	1A
Q109	B	C	1A
Q110	B	C	1A
Q111	A	C	3B
Q2001	A	C	4D
Q2006	B	C	4A
Q2007	B	C	4D
Q2008	B	C	4D
Q2061	B	C	3A
Q2071	B	C	4A
Q2072	B	C	4A
Q2401	B	C	6E
Q3002	B	C	4C
Q3003	B	C	5C
Q3004	B	C	5C
Q3005	B	C	4C

REF.No.	LOCATION		
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Q3104	B	C	1C
Q3105	B	C	1B
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Q3113	B	C	4A
Q3114	B	C	4A
Q3501	A	C	5A
Q3502	A	C	5A
Q3506	A	C	5A
Q3509	B	C	5A
Q3901	A	C	6A
Q3902	A	C	6A
Q3903	A	C	6A
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Q4002	A	C	2D
Q4004	A	C	1C
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Q4103	B	C	3A
Q4201	B	C	5D
Q4251	A	D	2D
Q4501	B	C	4D
Q4502	A	C	5E
Q4503	A	C	5E
Q6111	B	C	6C
Q6112	B	C	6C
Q6121	B	C	6C
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Q6163	A	C	7C
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Q6168	A	C	7D
Q6201	B	C	6E
Q6202	B	C	6E
Q6203	B	C	6E
RESISTOR			
R101	B	C	1A
R102	B	C	1A
R103	A	C	1A
R104	A	C	1A
R105	A	C	1B
R106	A	C	1B
R107	A	C	1B
R108	A	C	1B
R109	A	C	1B
R110	A	C	3D
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R114	A	C	8A
R115	A	C	8A
R116	A	C	8A
R117	B	C	1A
R118	A	C	7A
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R124	B	C	2B
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R126	A	C	1B
R127	A	C	2B
R128	B	C	2B
R129	B	C	2B
R130	A	C	6B
R131	A	C	6B
R132	B	C	2B
R133	B	C	2B
R134	B	C	4E
R135	B	C	2B
R136	A	C	4E
R137	A	C	2B
R138	A	C	1B
R139	B	C	4C
R140	A	C	1B
R141	A	C	2B
R142	A	C	2A
R143	B	C	2A
R144	B	C	2A
R145	A	C	3C
R146	A	C	1A
R147	A	C	3A
R148	A	C	2C
R150	A	C	4E
R152	A	C	2A
R153	A	C	2A
R154	A	C	3A
R155	A	C	3A
R156	A	C	3A
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R160	A	C	3A
R161	A	C	3A
R162	B	C	2A
R163	A	C	3B
R164	A	C	7E
R165	B	C	4C
R166	B	C	6D
R167	A	C	1B
R168	A	C	1B
R169	A	C	1B
R170	A	C	1B
R171	A	C	1B
R501	A	C	8C
R502	A	C	8C
R504	A	C	8B
R505	A	C	8B
R1201	B	C	4C
R1202	B	C	4D
R1203	B	C	4D
R1204	B	C	4D
R1601	A	C	8C
R1602	A	C	8C
R1603	B	C	7C
R1604	B	C	7C
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R2011	B	C	4D
R2012	B	C	4D
R2016	B	C	4A
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R3002	A	C	4C
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R3034	A	C	3C
R3035	B	C	4C
R3036	B	C	4C
R3101	B	C	3A
R3102	B	C	3A
R3103	B	C	3A
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R3109	B	C	1B
R3110	B	C	1B
R3111	B	C	1B
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R3539	A	C	5A
R3540	B	C	5A
R3901	A	C	5A
R3902	A	C	6A
R4001	B	C	2C
R4002	B	C	1C
R4003	B	C	2C
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R4023	A	C	2D
R4024	A	C	2D
R4025	A	C	2C
R4026	A	C	2C
R4027	A	C	1C
R4029	A	C	1C
R4035	B	C	2B
R4036	B	C	2B
R4037	B	C	2B
R4038	B	C	3B
R4101	B	C	3A
R4102	B	C	3A
R4103	B	C	3A
R4104	B	C	3A
R4105	B	C	3A
R4106	B	C	2A
R4107	B	C	2A
R4108	B	C	2A
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R4220	B	C	4E
R4221	B	C	4E
R4222	B	C	4E
R4223	B	C	4E
R4224	B	C	4E
R4251	B	C	6E
R4252	B	C	6E
R4253	B	C	5E
R4254	B	C	6E
R4255	B	C	5E
R4256	B	C	5E
R4257	B	C	5E
R4258	B	C	6E
R4259	B	C	6E
R4262	A	C	5E
R4501	B	C	5D
R4502	B	C	5D
R4503	B	C	4D
R4504	B	C	4D
R4505	B	C	5D
R4506	B	C	4D
R4507	B	C	4D
R4513	B	C	4D
R4514	B	C	5D
R4515	B	C	5D
R4516	A	C	5E
R4518	A	C	5E
R4519	A	C	5E
R4520	A	C	5E
R5201	B	C	2E
R5202	B	C	2E
R5211	B	C	3D
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R5213	A	C	2D
R5214	A	C	2D
R5215	A	C	2D
R5216	A	C	2D
R5217	B	C	3D
R5218	A	C	2D
R5220	A	C	2D
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R6012	B	C	7C
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R6125	B	C	5D
R6126	B	C	5D
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R6128	B	C	5D
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R6136	A	C	7D
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R6171	A	C	7C
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R6176	B	C	6D
R6177	B	C	6D
R6178	B	C	6D
R6179	B	C	7C
R6180	A	C	7D
R6181	A	C	7D
R6182	A	C	7C
R6183	A	C	7D
R6201	B	C	6E
R6202	B	C	6E
R6203	B	C	6E
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R6206	B	C	6E
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R6907	B	C	7C
R6914	B	C	7B
R6931	B	C	6C
R6932	B	C	6C
R7801	A	C	7D
R7802	A	C	7D
R7803	A	C	7D
R7804	A	C	7D
R7808	B	C	7D
R7809	A	C	7E
R7810	A	C	7D
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R8023	B	C	6A
R8024	B	C	6A
R8025	B	C	6A
R8026	B	C	6A
R8027	B	C	8A
R8028	B	C	6A
RA101	A	C	2A
RA102	A	C	2B
RA103	B	C	2B
RA104	B	C	2B
RA105	B	C	2B
RA106	A	C	3B
RA107	A	C	3A
RA108	A	C	3A
RA109	A	C	3A
TEST POINT			
TP101	A	C	2C
TP102	B	C	2B
TP103	A	C	2A
OTHER			
F6001	B	C	5D
F6003	B	C	6D
F6004	B	C	6D
F7801	A	C	7D
FL4101	B	C	3A
FL4102	B	C	3A
J501	B	D	8B
J502	A	D	5C
J503	B	D	8A
J504	A	D	1C
J505	A	D	1B
SW503	A	C	8D
X101	B	C	2A
X102	A	C	1A
X3001	A	D	4B
X8001	B	C	8A

COMPONENT PARTS LOCATION GUIDE (MAIN)

REF.No.	LOCATION		
CAPACITOR			
C101	A	C	1A
C102	B	C	2A
C103	B	C	2A
C104	B	C	1A
C105	B	C	1A
C106	B	C	2A
C107	B	C	2B
C108	A	C	1C
C109	A	C	3D
C110	A	C	3D
C111	B	C	2A
C112	B	C	2A
C113	A	C	2A
C114	A	C	2A
C115	B	C	1A
C116	A	C	8C
C118	A	C	2A
C119	A	C	3A
C120	A	C	3A
C121	B	C	2A
C122	B	C	2A
C123	B	C	2A
C124	B	C	2A
C125	A	C	1A
C126	A	C	1A
C127	A	C	3A
C128	A	C	2A
C129	A	C	3A
C130	B	C	1A
C131	A	C	3A
C132	A	C	3B
C133	A	C	2C
C134	A	C	2C
C135	A	C	2B
C136	A	C	2B
C137	A	C	4B
C138	A	C	1B
C140	A	C	2B
C143	A	C	2B
C144	A	C	7B
C146	A	C	4E
C147	A	C	4E
C1201	A	C	4D
C1202	A	C	4D
C1203	A	C	4D
C1204	B	C	4C
C1205	A	C	4D
C1206	A	C	4D
C1207	A	C	4D
C1601	B	C	8C
C1602	A	C	7D
C1603	B	C	7C
C1604	B	C	7C
C1605	B	C	7C
C1606	B	C	8C
C1607	B	C	8C
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C2010	A	C	4A
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C3005	B	C	4B
C3006	B	C	4B
C3007	B	C	4B
C3008	A	C	3C
C3009	A	C	4D
C3010	A	C	4C
C3011	A	C	4C
C3012	A	C	5C
C3013	A	C	4C
C3014	A	C	4C
C3015	A	C	5C
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C3023	A	C	4C
C3024	A	C	4C
C3027	B	C	4C
C3028	B	C	4C
C3031	A	C	4D
C3032	B	C	4B
C3033	B	C	4B
C3035	B	C	4B
C3037	B	C	3C
C3038	B	C	4C
C3101	B	C	1C
C3103	B	C	4B
C3104	B	C	4A
C3105	A	C	4A
C3106	A	C	4A
C3107	B	C	4A
C3108	B	C	4B
C3109	B	C	4B
C3112	B	C	4B
C3113	B	C	3B
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C4046	A	C	1C
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C4049	B	C	3D
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C4051	A	C	2C
C4055	B	C	2D
C4101	B	C	3A
C4102	B	C	2A
C4201	A	C	5D
C4202	A	C	5D
C4203	B	C	5D
C4204	B	C	6D
C4205	B	C	5D
C4206	B	C	5D
C4207	B	C	5D
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C4212	B	C	4E
C4213	B	C	5E
C4214	B	C	5D
C4251	A	C	6D
C4252	B	C	6E
C4253	B	C	5E
C4254	B	C	5E
C4255	A	C	5E
C4256	A	C	5D
C4257	B	C	6E
C4501	A	C	6D
C4502	A	C	5D
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C5229	B	C	3D
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C6143	B	C	8B
C6151	B	C	6C
C6153	B	C	6C
C6154	B	C	6C
C6155	B	C	6E
C6156	A	C	6D
C6157	B	C	6C
C6161	B	C	6B
C6162	B	C	6B
C6163	B	C	7B
C6164	A	C	6C
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C6175	B	C	6D
C6201	A	C	6D
C7801	A	C	7D
C7802	A	C	7D
C7803	A	C	7E
C7804	A	C	7E
C7805	B	C	7D
C7806	B	C	7D
C7807	B	C	7D
C7809	A	C	7E
C7810	B	C	7D
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C8008	B	C	6A
C8009	B	C	6B
C8010	B	C	6B
C8011	B	C	7B
C8012	B	C	7A
C8013	A	C	6A
C8014	A	C	6B
C8015	A	C	7B
C8016	A	C	7B
C8017	A	C	7B
C8018	A	C	7A
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C8040	B	C	6A
C8041	A	C	7B
C8042	A	C	7A
C8043	A	C	8A
C8044	A	C	8B
CONNECTOR			
CN1	A	C	4A
CN2	A	C	8A
CN3	A	C	4D
CN4	A	C	2A
CN5	A	C	5A
CN7	A	C	3D
CN8	A	C	4A
CN11	A	C	7D
CN12	B	C	7D
CN13	A	C	8C
CN14	A	C	2A
CN15	A	C	4D
CN16	A	C	7E
CN18	A	C	4E
CN22	A	C	3D
CN25	A	C	3C
CN26	A	C	3C
CN27	B	C	7E
DIODE			
D101	A	C	1A
D102	A	C	1B
D103	A	C	1B
D105	A	C	7A
D106	A	C	7A
D107	A	C	3C
D501	A	C	8B
D502	A	C	8B
D503	A	C	8B
D504	A	C	8B
D505	A	C	8B
D506	A	C	8B
D1601	B	C	8D
D3001	B	C	4B
D3002	B	C	5C
D3101	B	C	1B
D3102	B	C	1C
D3103	B	C	1B
D4001	A	C	2C
D4002	A	C	2C
D5201	B	C	3D
D5202	B	C	3D
D6111	B	C	5C
D6121	B	C	5C
D6131	B	C	6C
D6141	B	C	5C
D6151	B	C	6C
D6152	B	C	6D
D6161	B	C	7B
D6162	B	C	6B
D6163	B	C	6B
D6164	B	C	6D
D6165	A	C	7C
IC			
IC101	A	C	2B
IC102	A	C	2A
IC103	B	C	1A
IC104	B	C	2B
IC105	B	C	3B
IC106	B	C	1A
IC107	A	C	1A
IC1201	B	C	4D
IC1601	B	C	8C
IC1801	A	D	2D
IC2001	B	C	4D
IC2401	A	C	6E
IC3001	A	C	4C
IC3002	A	C	4B
IC3003	B	C	4C
IC3004	B	C	4C
IC3101	B	C	4A
IC3501	B	C	5A
IC3901	A	C	5A
IC4001	B	C	3C
IC4002	A	C	2C
IC4003	A	C	2C
IC4004	A	C	2C
IC4005	A	C	2C
IC4201	B	C	5E
IC4202	B	C	5D
IC4251	B	C	5E
IC4501	B	C	4D
IC5201	B	C	2D
IC5202	A	C	2D
IC6001	B	C	7C
IC7801	A	C	7D
IC7802	A	C	7D
IC7803	B	C	7D
IC8001	B	C	7A
IC8002	A	C	7B
IC8003	A	C	6A
IC8004	A	C	7B
IC8005	B	C	6A
IC8006	B	C	8B
IC8007	B	C	7A
COIL			
L101	A	C	2A
L102	A	C	3D
L103	A	C	3D
L501	B	C	8B
L502	A	C	8B
L2001	B	C	4E
L2002	A	C	4A
L2003	A	C	4D
L2051	B	C	1C
L2052	B	C	1C
L2401	A	C	6E
L3002	B	C	5C
L3003	B	C	5C
L3101	B	C	1C
L3104	B	C	3A
L3106	B	C	4A
L3107	B	C	4A
L3501	A	C	5A
L3502	A	C	5A
L3901	A	C	6A
L4001	A	C	2C
L4002	A	C	2C
L4003	A	C	1C
L4004	A	C	2D
L4005	A	C	1C
L4201	A	C	5E
L4501	A	C	6E
L4502	A	C	5E
L4503	A	C	5E
L5201	B	C	3E
L5202	B	C	2E
L5203	A	C	3E
L5204	A	C	2D
L6001	B	C	6D
L6002	B	C	6D
L6004	B	C	6D
L6111	A	C	6C
L6121	A	C	6C
L6131	A	C	6C
L6141	A	C	6B
L6151	A	C	6C
L6161	A	C	6B
L6202	B	C	6D
L7801	A	C	7D
L7803	B	C	7D
L8001	B	C	6A
L8002	A	C	6A
L8003	A	C	6A
L8004	B	C	8B
TRANSISTOR			
Q101	A	C	1B
Q102	A	C	1B
Q103	A	C	3D
Q104	A	C	8A
Q105	A	C	8A
Q106	A	C	8A
Q107	A	C	8A
Q108	B	C	1A
Q109	B	C	1A
Q110	B	C	1A
Q111	A	C	3B
Q2001	A	C	4D
Q2006	B	C	4A
Q2007	B	C	4D
Q2008	B	C	4D
Q2061	B	C	3A
Q2071	B	C	4A
Q2072	B	C	4A
Q2401	B	C	6E
Q3002	B	C	4C
Q3003	B	C	5C
Q3004	B	C	5C
Q3005	B	C	4C

REF.No.	LOCATION		
Q3101	B	C	1B
Q3102	B	C	1B
Q3103	B	C	1C
Q3104	B	C	1C
Q3105	B	C	1B
Q3106	B	C	1B
Q3113	B	C	4A
Q3114	B	C	4A
Q3501	A	C	5A
Q3502	A	C	5A
Q3506	A	C	5A
Q3509	B	C	5A
Q3901	A	C	6A
Q3902	A	C	6A
Q3903	A	C	6A
Q3904	A	C	5A
Q4001	A	C	2D
Q4002	A	C	2D
Q4004	A	C	1C
Q4101	B	C	3A
Q4102	B	C	3A
Q4103	B	C	3A
Q4201	B	C	5D
Q4251	A	D	2D
Q4501	B	C	4D
Q4502	A	C	5E
Q4503	A	C	5E
Q6111	B	C	6C
Q6112	B	C	6C
Q6121	B	C	6C
Q6122	B	C	6C
Q6123	B	C	6D
Q6124	B	C	5D
Q6131	B	C	6C
Q6141	B	C	6C
Q6151	B	C	6C
Q6161	B	C	6C
Q6162	A	C	6C
Q6163	A	C	7C
Q6164	A	C	7C
Q6165	B	C	6D
Q6166	B	C	6D
Q6167	B	C	6D
Q6168	A	C	7D
Q6201	B	C	6E
Q6202	B	C	6E
Q6203	B	C	6E
RESISTOR			
R101	B	C	1A
R102	B	C	1A
R103	A	C	1A
R104	A	C	1A
R105	A	C	1B
R106	A	C	1B
R107	A	C	1B
R108	A	C	1B
R109	A	C	1B
R110	A	C	3D
R111	A	C	3D
R112	A	C	3D
R113	A	C	8A
R114	A	C	8A
R115	A	C	8A
R116	A	C	8A
R117	B	C	1A
R118	A	C	7A
R119	A	C	7A
R120	A	C	7A
R121	A	C	7A
R122	A	C	2A
R123	B	C	2A
R124	B	C	2B
R125	A	C	1B
R126	A	C	1B
R127	A	C	2B
R128	B	C	2B
R129	B	C	2B
R130	A	C	6B
R131	A	C	6B
R132	B	C	2B
R133	B	C	2B
R134	A	C	4E
R135	B	C	2B
R136	A	C	4E
R137	A	C	2B
R138	A	C	1B
R139	B	C	4C
R140	A	C	1B
R141	A	C	2B
R142	A	C	2A
R143	B	C	2A
R144	B	C	2A
R145	A	C	3C
R146	A	C	1A
R147	A	C	3A
R148	A	C	2C
R150	A	C	4E
R152	A	C	2A
R153	A	C	2A
R154	A	C	3A
R155	A	C	3A
R156	A	C	3A
R157	A	C	3A
R158	A	C	3A
R159	A	C	3A
R160	A	C	3A
R161	A	C	3A
R162	B	C	2A
R163	A	C	3B
R164	A	C	7E
R165	B	C	4C
R166	B	C	6D
R167	A	C	1B
R168	A	C	1B
R169	A	C	1B
R170	A	C	1B
R171	A	C	1B
R501	A	C	8C
R502	A	C	8C
R504	A	C	8B
R505	A	C	8B
R1201	B	C	4C
R1202	B	C	4D
R1203	B	C	4D
R1204	B	C	4D
R1601	A	C	8C
R1602	A	C	8C
R1603	B	C	7C
R1604	B	C	7C
R1605	B	C	7C
R1606	B	C	7C
R1607	B	C	7C
R1608	B	C	7C
R1609	B	C	7C
R1610	B	C	8B
R1611	B	C	7C
R1612	B	C	8C
R1613	B	C	8B
R1614	B	C	8C
R1615	B	C	8C
R1616	B	C	8C
R1617	B	C	8C
R1618	A	C	8C
R1619	A	C	8C
R1620	A	C	8C
R1621	A	C	8C
R1622	A	C	8C
R1623	B	C	8C
R1624	B	C	7B
R1625	B	C	8C
R1626	A	C	7C
R1627	A	C	8C
R1628	B	C	8D
R1629	B	C	8D
R1630	B	C	8D
R1631	B	C	8B
R1632	B	C	8C
R1633	B	C	8C
R2001	B	C	3D
R2002	B	C	4D
R2003	B	C	3D
R2004	B	C	4D
R2005	A	C	4D
R2006	A	C	4D
R2011	B	C	4D
R2012	B	C	4D
R2016	B	C	4A
R2021	B	C	4A
R2022	B	C	4A
R2023	B	C	4A
R2024	B	C	4A
R2025	B	C	4A
R2026	B	C	1C
R2027	B	C	1C
R2029	B	C	3B
R2061	B	C	3A
R2062	B	C	4A
R2063	B	C	4A
R2071	B	C	4A
R2072	B	C	4A
R2073	B	C	4A
R2074	B	C	4A
R2075	B	C	4A
R2076	B	C	4A
R2401	A	C	7E
R2402	A	C	7E
R2403	A	C	7E
R2404	A	C	7E
R3001	B	C	4B
R3002	A	C	4C
R3004	A	C	5C
R3006	A	C	4C
R3007	A	C	4C
R3008	A	C	5C
R3009	A	C	3B
R3010	A	C	3B
R3014	B	C	4C
R3015	B	C	4C
R3016	B	C	4C
R3017	B	C	4C
R3018	A	C	4C
R3021	B	C	4C
R3022	B	C	5C
R3023	B	C	5C
R3024	B	C	5C
R3025	B	C	4B
R3026	B	C	4B
R3027	B	C	4B
R3028	A	C	4B
R3029	B	C	4C
R3030	B	C	3C
R3031	B	C	4C
R3032	B	C	5C
R3033	B	C	5C
R3034	A	C	3C
R3035	B	C	4C
R3036	B	C	4C
R3101	B	C	3A
R3102	B	C	3A
R3103	B	C	3A
R3108	B	C	3A
R3109	B	C	1B
R3110	B	C	1B
R3111	B	C	1B
R3112	B	C	1C
R3113	B	C	1C
R3114	B	C	1C
R3115	B	C	1B
R3116	B	C	1B
R3117	B	C	1B
R3131	B	C	4A
R3132	B	C	4A
R3134	B	C	3E
R3135	B	C	4A
R3136	B	C	4A
R3137	B	C	4A
R3138	B	C	4A
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R3503	B	C	5A
R3504	A	C	5A
R3506	A	C	5A
R3508	B	C	5A
R3509	A	C	5A
R3515	A	C	5A
R3519	B	C	5A
R3520	B	C	5A
R3536	A	C	5A
R3537	A	C	5A
R3538	A	C	5A
R3539	A	C	5A
R3540	B	C	5A
R3901	A	C	5A
R3902	A	C	6A
R4001	B	C	2C
R4002	B	C	1C
R4003	B	C	2C
R4004	B	C	2C
R4006	B	C	2C
R4007	B	C	2C
R4008	B	C	1D
R4009	B	C	2D
R4010	B	C	2C
R4011	B	C	1D
R4012	B	C	1D
R4013	B	C	2D
R4014	B	C	2D
R4015	A	C	2D
R4016	A	C	2D
R4017	A	C	2D
R4018	A	C	2D
R4019	A	C	2D
R4020	A	C	2D
R4021	A	C	2D
R4022	A	C	2D
R4023	A	C	2D
R4024	A	C	2D
R4025	A	C	2C
R4026	A	C	2C
R4027	A	C	1C
R4029	A	C	1C
R4035	B	C	2B
R4036	B	C	2B
R4037	B	C	2B
R4038	B	C	3B
R4101	B	C	3A
R4102	B	C	3A
R4103	B	C	3A
R4104	B	C	3A
R4105	B	C	3A
R4106	B	C	2A
R4107	B	C	2A
R4108	B	C	2A
R4109	B	C	3A
R4110	B	C	3A
R4111	B	C	3A
R4201	B	C	5D
R4202	B	C	5D
R4203	B	C	6D
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R4212	B	C	5D
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R4221	B	C	4E
R4222	B	C	4E
R4223	B	C	4E
R4224	B	C	4E
R4251	B	C	6E
R4252	B	C	6E
R4253	B	C	5E
R4254	B	C	6E
R4255	B	C	5E
R4256	B	C	5E
R4257	B	C	5E
R4258	B	C	6E
R4259	B	C	6E
R4262	A	C	5E
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R4503	B	C	4D
R4504	B	C	4D
R4505	B	C	5D
R4506	B	C	4D
R4507	B	C	4D
R4513	B	C	4D
R4514	B	C	5D
R4515	B	C	5D
R4516	A	C	5E
R4518	A	C	5E
R4519	A	C	5E
R4520	A	C	5E
R5201	B	C	2E
R5202	B	C	2E
R5211	B	C	3D
R5212	A	C	2D
R5213	A	C	2D
R5214	A	C	2D
R5215	A	C	2D
R5216	A	C	2D
R5217	B	C	3D
R5218	A	C	2D
R5220	A	C	2D
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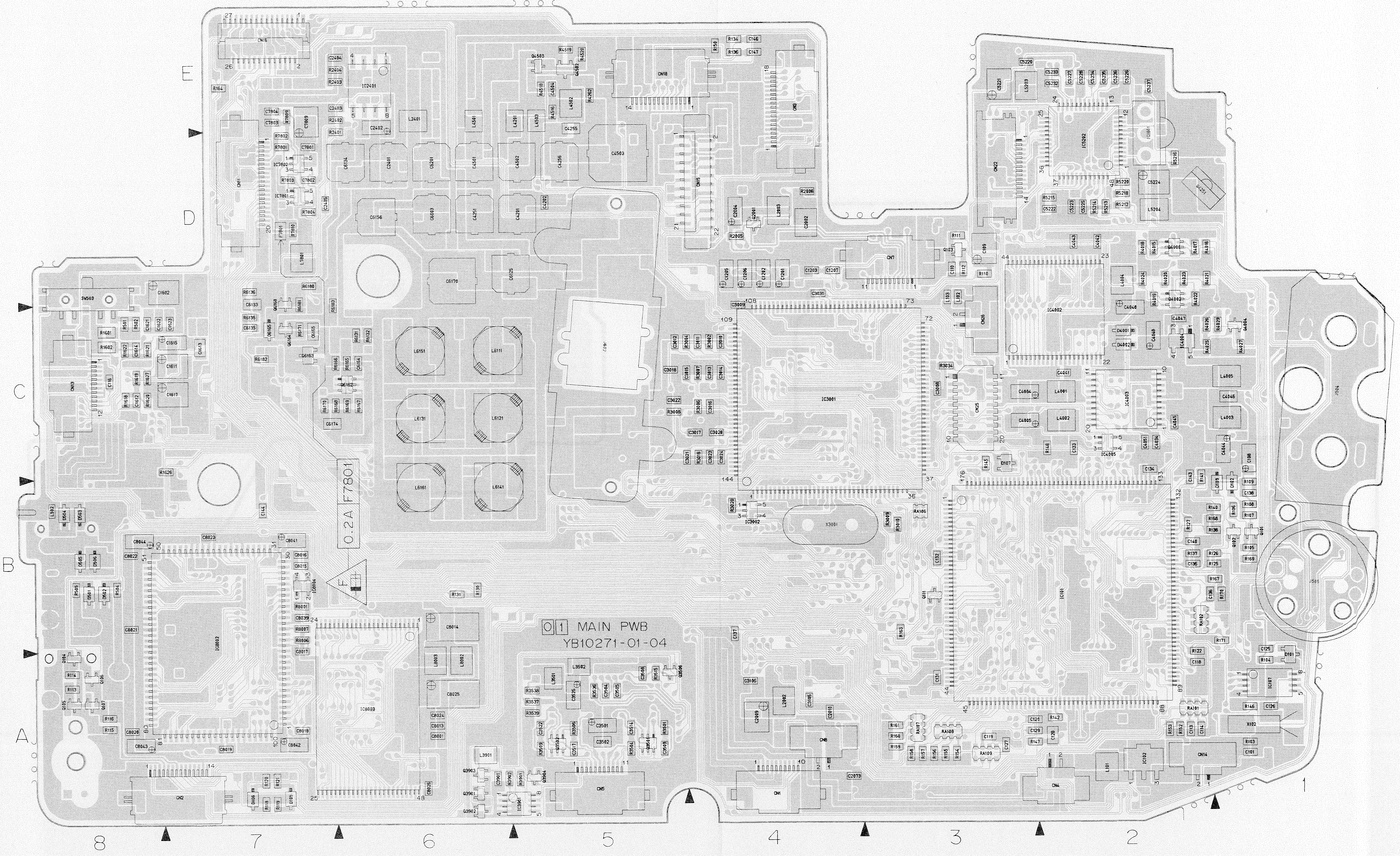
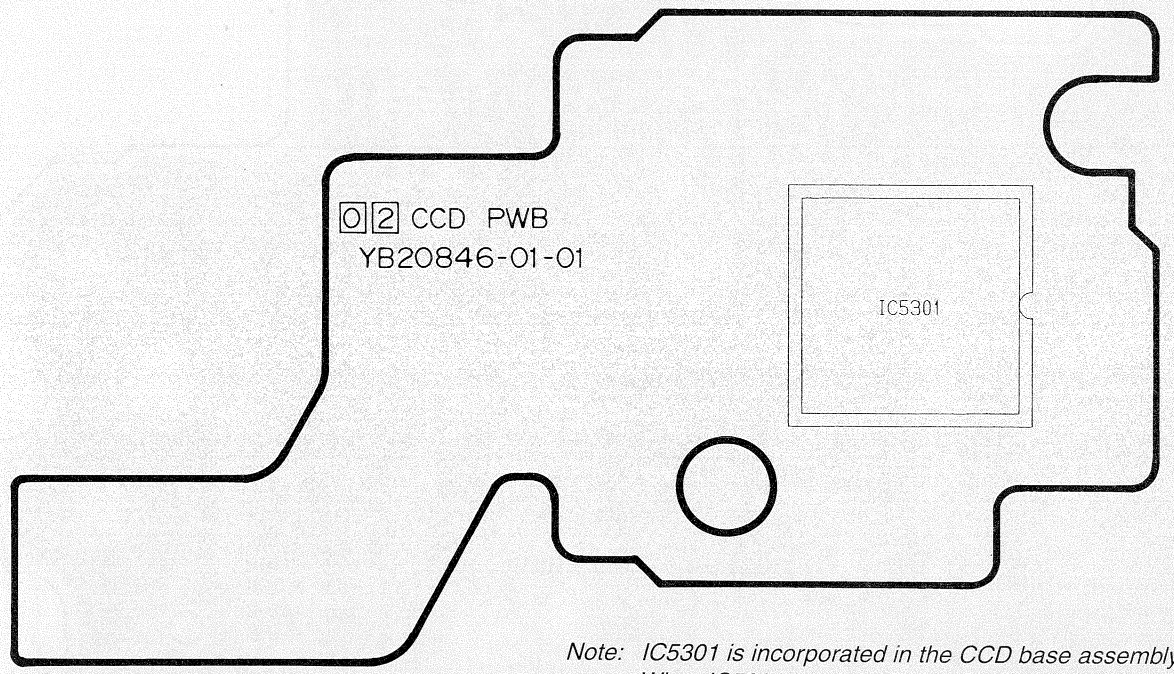
R6002	B	C	7C
R6009	B	C	7C
R6010	B	C	7C
R6011	B	C	7C
R6012	B	C	7C
R6111	B	C	6C
R6112	B	C	6C
R6113	B	C	6C
R6114	B	C	6C
R6115	B	C	6C
R6121	B	C	6C
R6122	B	C	6C
R6123	B	C	6C
R6124	B	C	6C
R6125	B	C	5D
R6126	B	C	5D
R6127	B	C	5D
R6128	B	C	5D
R6129	B	C	6C
R6131	A	C	6C
R6132	A	C	6C
R6133	B	C	7C
R6134	B	C	7C
R6135	A	C	7C
R6136	A	C	7D
R6137	B	C	6C
R6138	B	C	6C
R6141	B	C	6B
R6142	B	C	7C
R6143	B	C	6C
R6144	B	C	6B
R6145	B	C	7B
R6146	B	C	7B
R6151	B	C	7C
R6152	B	C	6C
R6153	B	C	6C
R6154	B	C	7C
R6161	B	C	6B
R6162	B	C	7B
R6163	B	C	7C
R6164	B	C	7B
R6165	A	C	6C
R6166	A	C	6C
R6167	A	C	6C
R6168	A	C	6C
R6169	A	C	6C
R6170	A	C	7C
R6171	A	C	7C
R6172	B	C	6D
R6173	B	C	6D
R6174	B	C	6D
R6175	B	C	6D
R6176	B	C	6D
R6177	B	C	6D
R6178	B	C	6D
R6179	B	C	7C
R6180	A	C	7D
R6181	A	C	7D
R6182	A	C	7C
R6183	A	C	7D
R6201	B	C	6E
R6202	B	C	6E
R6203	B	C	6E
R6204	B	C	6E
R6205	B	C	6E
R6206	B	C	6E
R6902	B	C	6D
R6903	B	C	7B
R6907	B	C	7C
R6914	B	C	7B
R6931	B	C	6C
R6932	B	C	6C
R7801	A	C	7D
R7802	A	C	7D
R7803	A	C	7D
R7804	A	C	7D
R7808	B	C	7D
R7809	A	C	7E
R7810	A	C	7D
R8001	A	C	7B
R8002	B	C	7A
R8003	B	C	7A
R8004	B	C	7B
R8005	B	C	7B
R8006	A	C	7B
R8007	A	C	7B
R8008	B	C	6A
R8009	B	C	6A
R8010	B	C	6A
R8011	B	C	6A
R8012	B	C	6B
R8013	B	C	6A
R8014	B	C	6A
R8015	B	C	6B
R8016	B	C	6B
R8017	B	C	6B
R8018	B	C	6B
R8019	B	C	6B
R8020	B	C	6B
R8021	B	C	6B
R8022	B	C	6A
R8023	B	C	6A
R8024	B	C	6A
R8025	B	C	6A
R8026	B	C	6A
R8027	B	C	8A
R8028	B	C	6A
RA101	A	C	2A
RA102	A	C	2B
RA103	B	C	2B
RA104	B	C	2B
RA105	B	C	2B
RA106	A	C	3B
RA107	A	C	3A
RA108	A	C	3A
RA109	A	C	3A
TEST POINT			
TP101	A	C	2C
TP102	B	C	2B
TP103	A	C	2A
OTHER			
F6001	B	C	5D
F6003	B	C	6D
F6004	B	C	6D
F7801	A	C	7D
FL4101	B	C	3A
FL4102	B	C	3A
J501	B	D	8B
J502	A	D	5C
J503	B	D	8A
J504	A	D	1C
J505	A	D	1B
SW503	A	C	8D
X101	B	C	2A
X102	A	C	1A
X3001	A	D	4B
X8001	B	C	8A

COMPONENT SIDE (A)


E
D
C
B
A
8
7
6
5
4
3
2
1
01 MAIN PWB
YB10271-01-04
0.2A F7801
IC3001
IC101
IC8002
IC8003
IC4002
IC5202
CN1
CN2
CN4
CN5
CN7
CN8
CN14
CN15
CN16
CN18
X3001

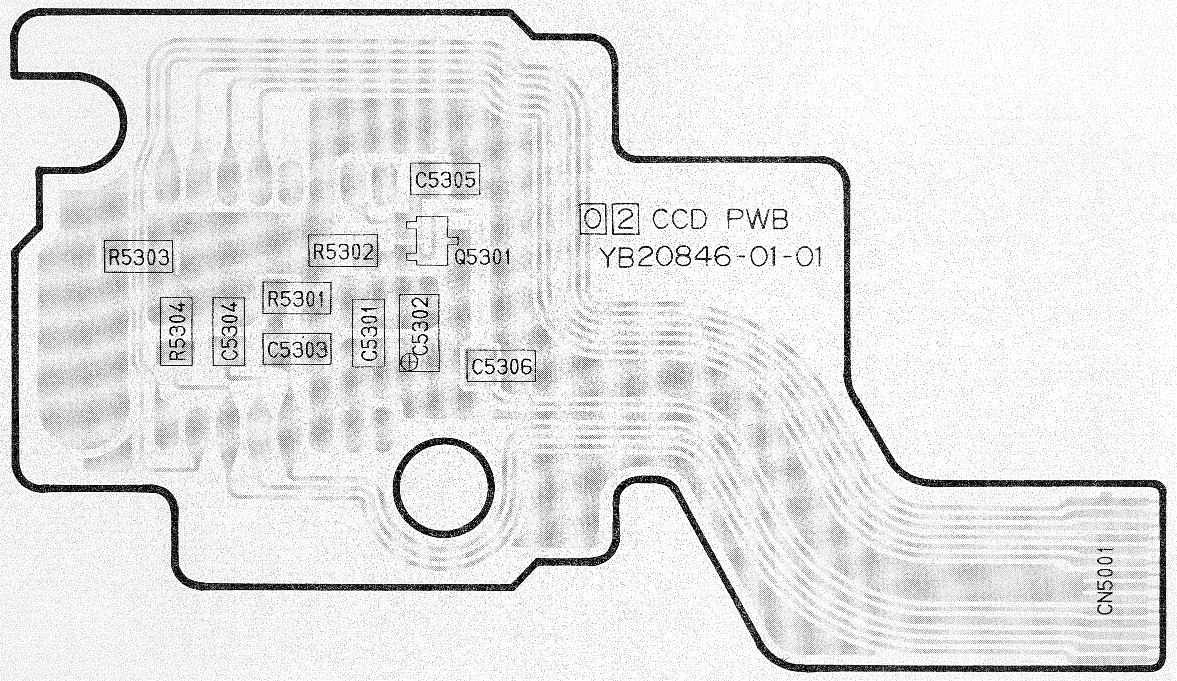
4.16 CCD CIRCUIT BOARD

FOIL SIDE (B)


02 CCD PWB
YB20846-01-01
IC5301

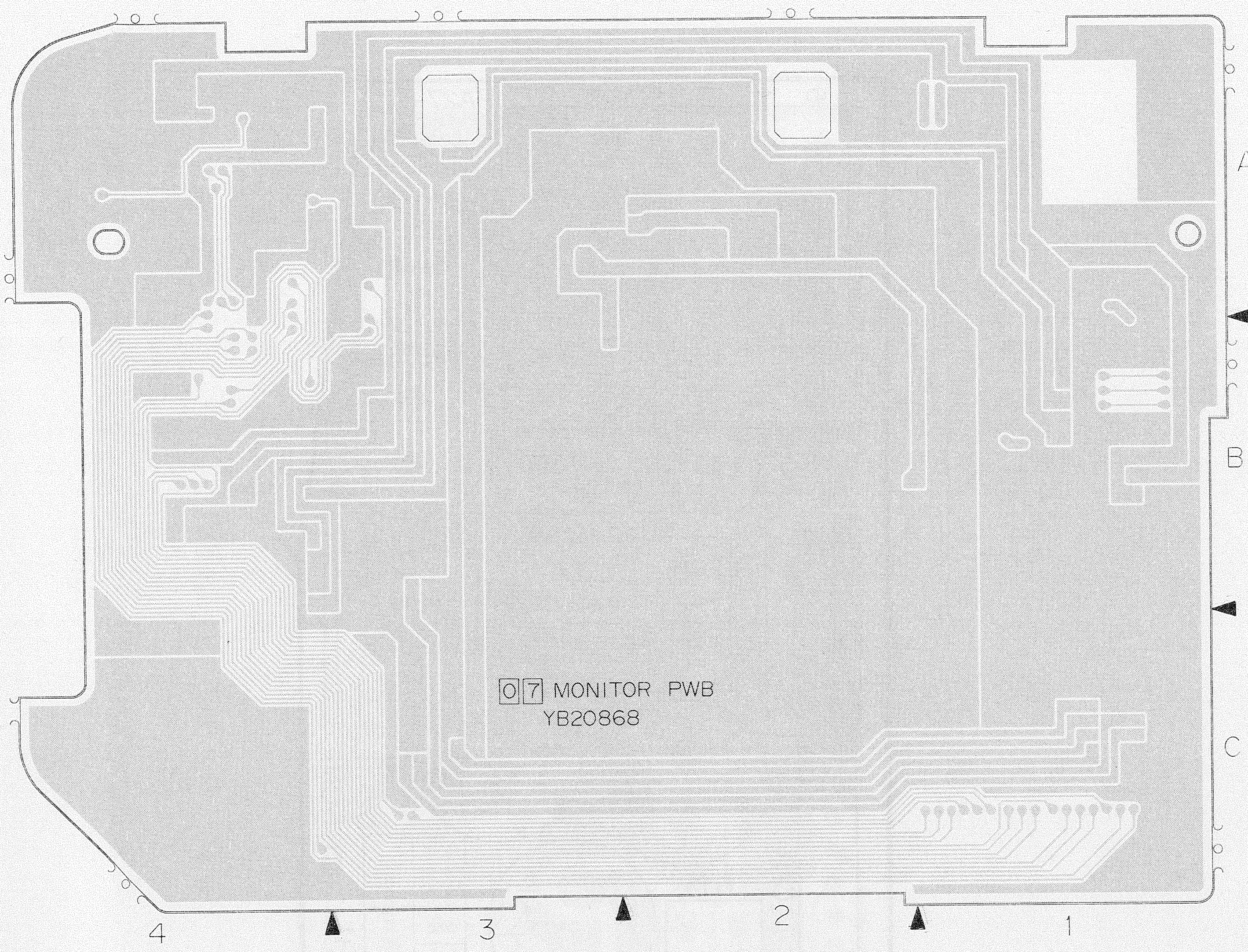
Note: *IC5301 is incorporated in the CCD base assembly. When IC5301 needs replacement, replace the CCD base assembly in whole because it cannot be replaced alone.*

COMPONENT SIDE (A)

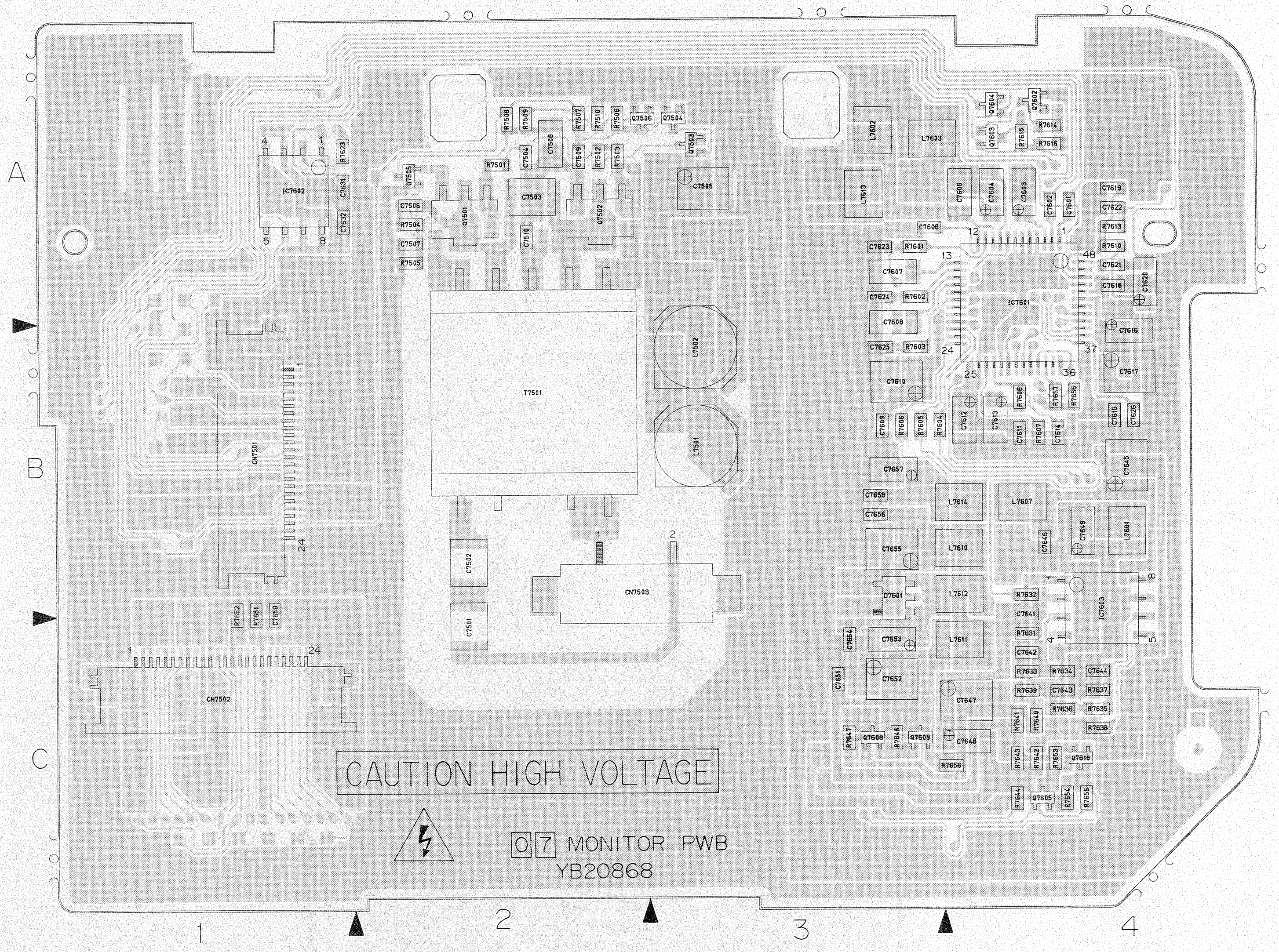

C5305
02 CCD PWB
YB20846-01-01
R5303
R5302
Q5301
R5301
R5304
C5304
C5303
C5301
C5302
C5306
CN5001

4.17 MONITOR CIRCUIT BOARD

FOIL SIDE (B)



COMPONENT SIDE (A)

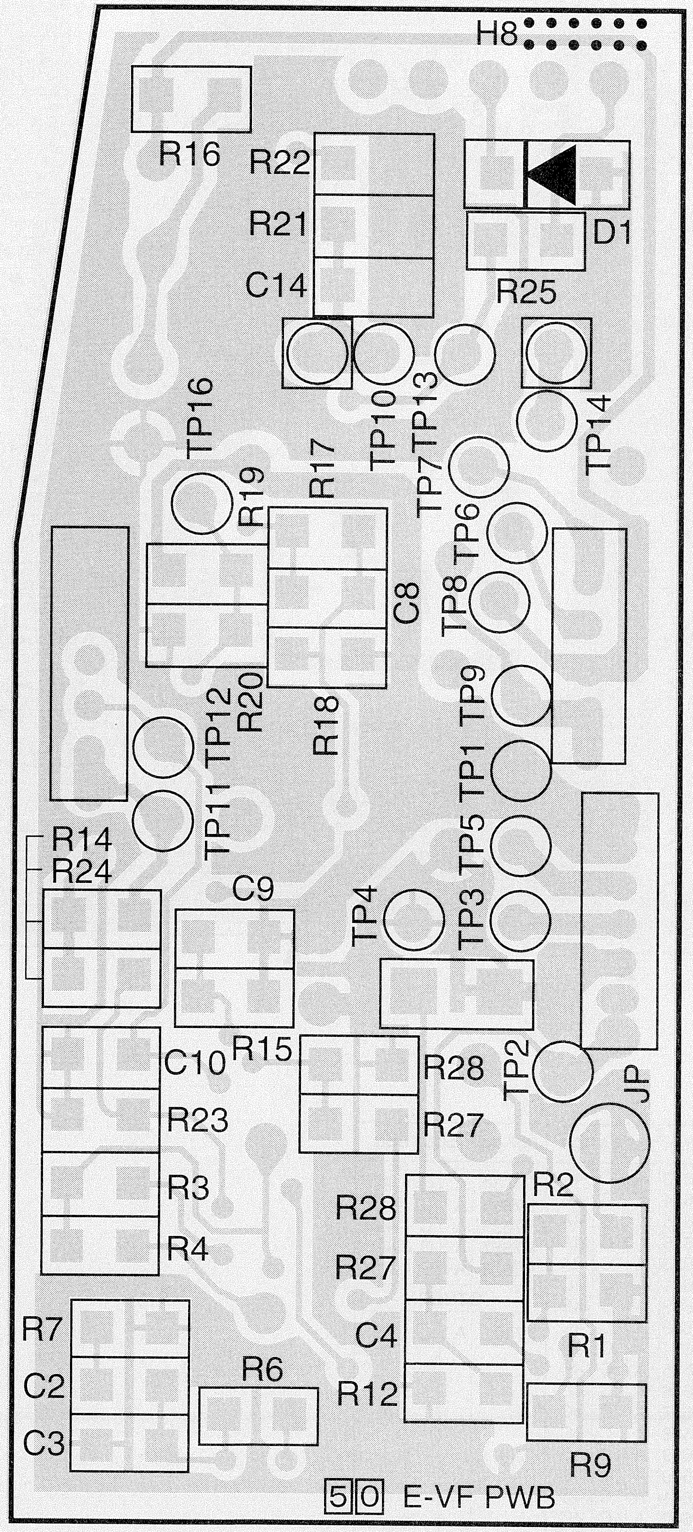


COMPONENT PARTS LOCATION GUIDE (MONITOR)

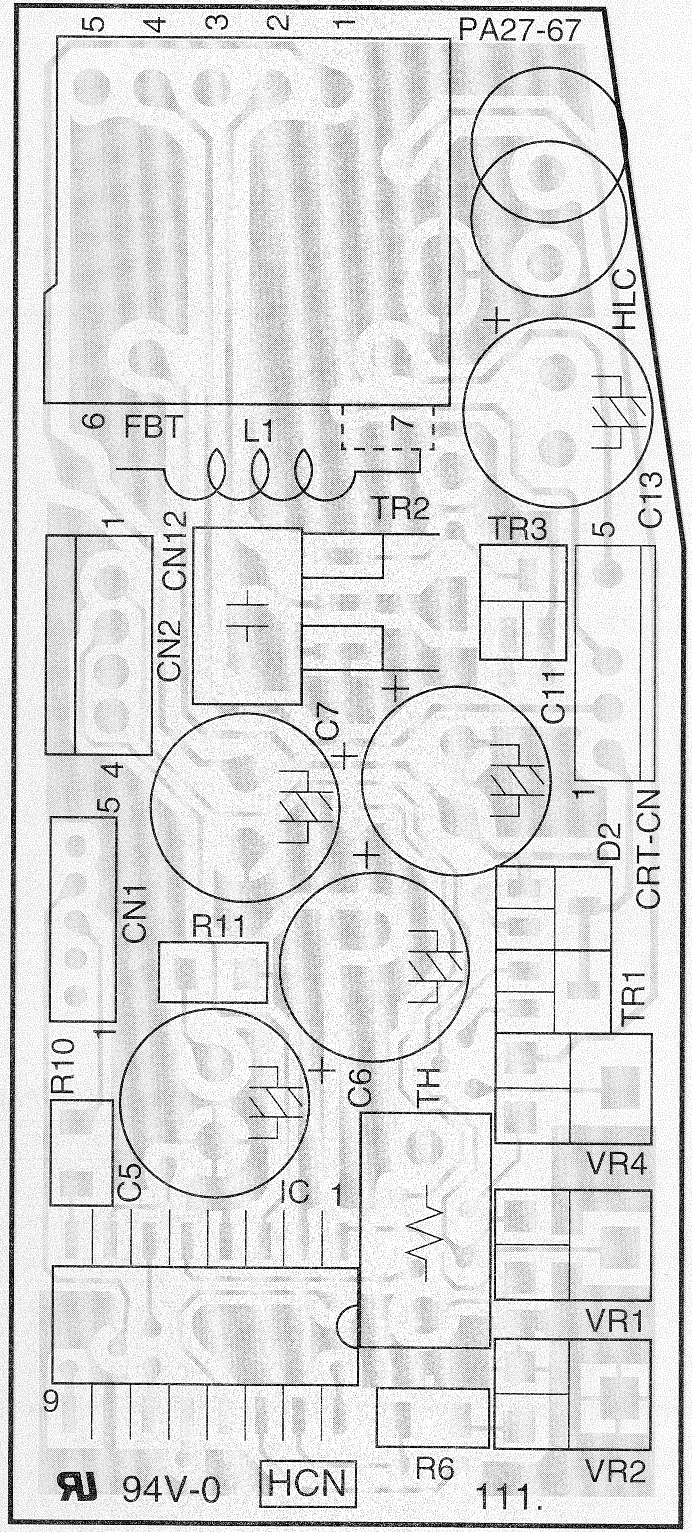
REF.No.	LOCATION		
CAPACITOR			
C7501	A	C	2C
C7502	A	C	2B
C7503	A	C	2A
C7504	A	C	2A
C7505	A	C	3A
C7506	A	C	2A
C7507	A	C	2A
C7508	A	C	2A
C7509	A	C	2A
C7510	A	C	2A
C7601	A	C	4A
C7602	A	C	4A
C7603	A	C	4A
C7604	A	C	4A
C7605	A	C	4A
C7606	A	C	4A
C7607	A	C	3A
C7608	A	C	3B
C7609	A	C	3B
C7610	A	C	3B
C7611	A	C	4B
C7612	A	C	4B
C7613	A	C	4B
C7614	A	C	4B
C7615	A	C	4B
C7616	A	C	4B
C7617	A	C	4B
C7618	A	C	4A
C7619	A	C	4A
C7620	A	C	4A
C7621	A	C	4A
C7622	A	C	4A
C7623	A	C	3A
C7624	A	C	3A
C7625	A	C	3B
C7626	A	C	4B
C7631	A	C	2A
C7632	A	C	2A
C7641	A	C	4C
C7642	A	C	4C
C7643	A	C	4C
C7644	A	C	4C
C7645	A	C	4B
C7646	A	C	4B
C7647	A	C	4C
C7648	A	C	4C
C7649	A	C	4B
C7651	A	C	3C
C7652	A	C	3C
C7653	A	C	3C
C7654	A	C	3C
C7655	A	C	3B
C7656	A	C	3B
C7657	A	C	3B
C7658	A	C	3B
C7659	A	C	1C
CONNECTOR			
CN7501	A	C	1B
CN7502	A	C	1C
CN7503	A	C	2B
DIODE			
D7601	A	C	3B
IC			
IC7601	A	C	4A
IC7602	A	C	1A
IC7603	A	C	4C
COIL			
L7501	A	C	3B
L7502	A	C	3B
L7601	A	C	4B
L7602	A	C	3A
L7603	A	C	4A
L7607	A	C	4B
L7610	A	C	4B
L7611	A	C	4C
L7612	A	C	4B
L7613	A	C	3A
L7614	A	C	4B
TRANSISTOR			
Q7501	A	C	2A
Q7502	A	C	2A
Q7503	A	C	3A
Q7504	A	C	3A
Q7505	A	C	2A
Q7506	A	C	3A
Q7602	A	C	4A
Q7603	A	C	4A
Q7604	A	C	4A
Q7605	A	C	4C
Q7608	A	C	3C
Q7609	A	C	3C
Q7610	A	C	4C
RESISTOR			
R7501	A	C	2A
R7502	A	C	2A
R7503	A	C	2A
R7504	A	C	2A
R7505	A	C	2A
R7506	A	C	2A
R7507	A	C	2A
R7508	A	C	2A
R7509	A	C	2A
R7510	A	C	2A
R7601	A	C	3A
R7602	A	C	3A
R7603	A	C	3B
R7604	A	C	4B
R7605	A	C	3B
R7606	A	C	3B
R7607	A	C	4B
R7608	A	C	4B
R7610	A	C	4A
R7613	A	C	4A
R7614	A	C	4A
R7615	A	C	4A
R7616	A	C	4A
R7623	A	C	2A
R7631	A	C	4C
R7632	A	C	4B
R7633	A	C	4C
R7634	A	C	4C
R7635	A	C	4C
R7636	A	C	4C
R7637	A	C	4C
R7638	A	C	4C
R7639	A	C	4C
R7640	A	C	4C
R7641	A	C	4C
R7642	A	C	4C
R7643	A	C	4C
R7644	A	C	4C
R7646	A	C	3C
R7647	A	C	3C
R7651	A	C	1C
R7652	A	C	1C
R7653	A	C	4C
R7654	A	C	4C
R7655	A	C	4C
R7656	A	C	4B
R7657	A	C	4B
R7658	A	C	4C
OTHER			
T7501	A	C	2B

4.18 ELECTRONIC VIEWFINDER CIRCUIT BOARD

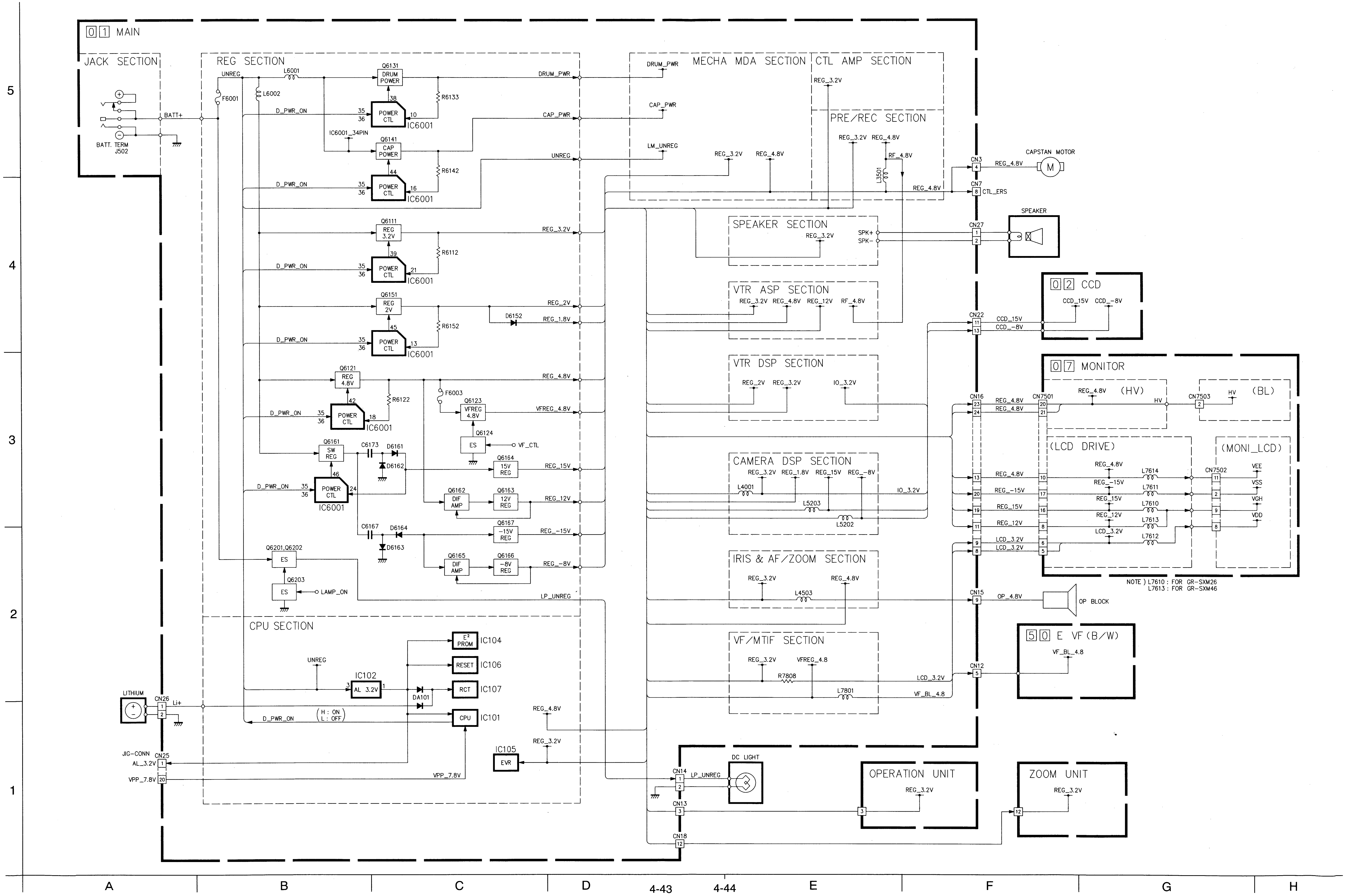
FOIL SIDE (B)


H8
R16
R22
R21
C14
D1
R25
TP16
TP10
TP7TP13
TP14
R17
R19
TP6
C8
TP8
TP12
R20
R18
TP9
TP1
TP11
R14
R24
TP5
TP3
TP4
C9
C10
R15
R28
R27
TP2
JP
R23
R3
R4
R28
R27
R2
C4
R1
R7
C2
C3
R6
R12
R9
50 E-VF PWB

COMPONENT SIDE (A)

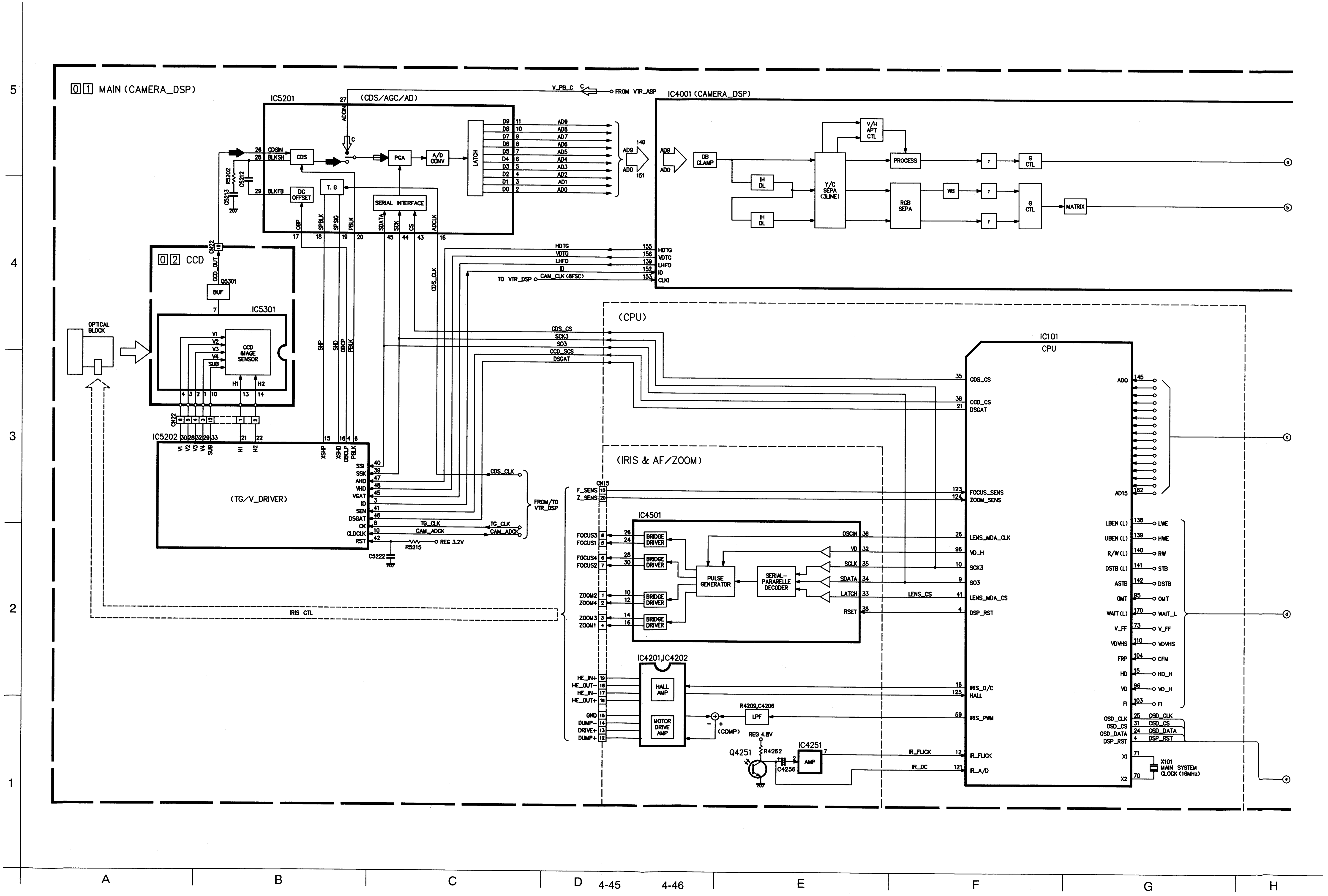

5 4 3 2 1
PA27-67
HLC
6 FBT
L1
7
TR2
TR3
5
C13
1
CN12
CN2
C7
C11
1
5 4
CN1
R11
D2
CRT-CN
TR1
R10
1
C6
TH
C5
IC 1
VR4
VR1
9
R6
VR2
94V-0
HCN
111.

4.19 POWER SYSTEM BLOCK DIAGRAM

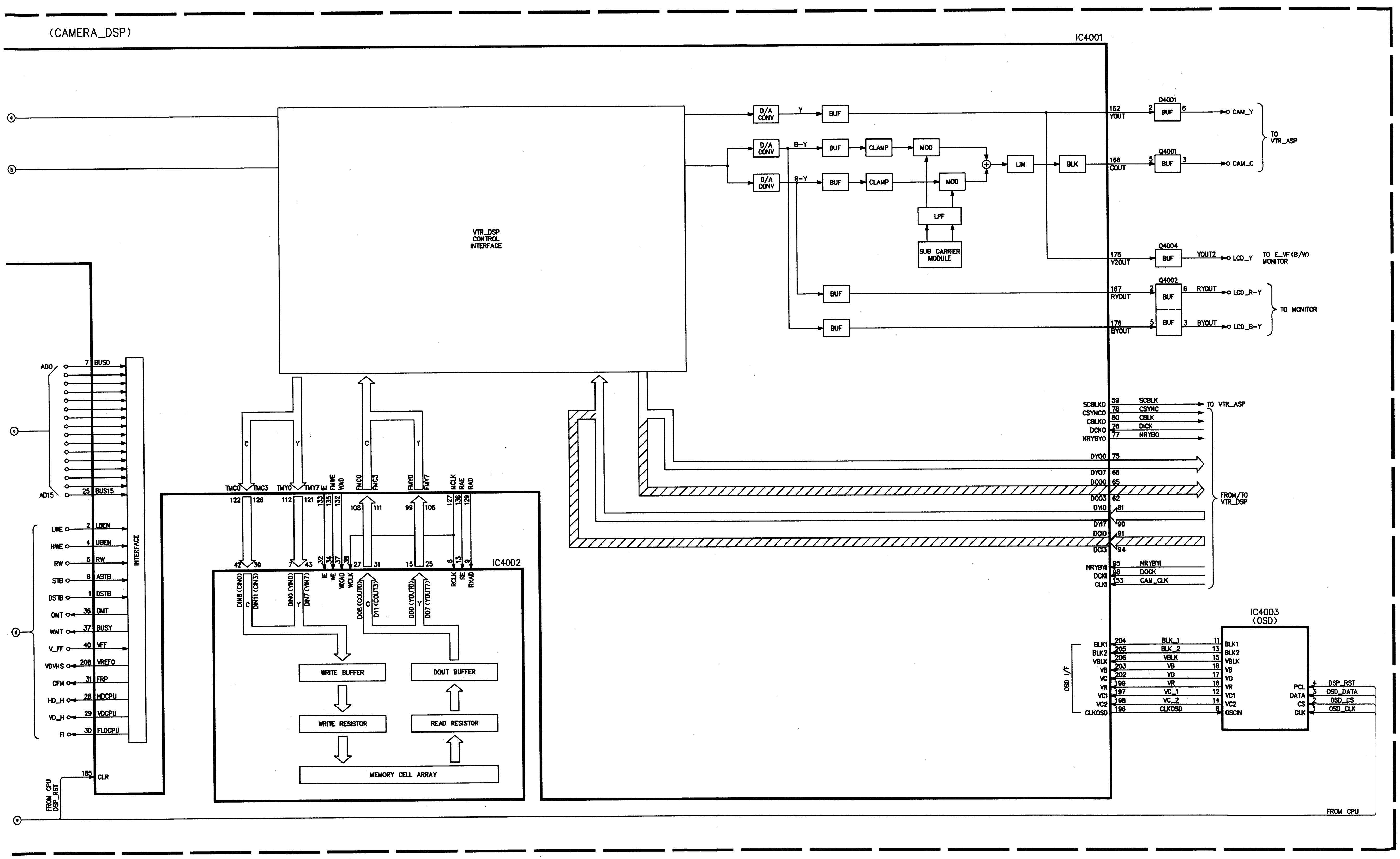


01 MAIN
JACK SECTION
BATT. TERM
J502
BATT+
REG SECTION
UNREG
L6001
L6002
F6001
Q6131
DRUM POWER
D_PWR_ON
POWER CTL
IC6001
R6133
DRUM_PWR
CAP_PWR
IC6001_34PIN
Q6141
CAP POWER
R6142
UNREG
Q6111
REG 3.2V
R6112
REG_3.2V
Q6151
REG 2V
R6152
D6152
REG_2V
REG_1.8V
Q6121
REG 4.8V
R6122
F6003
Q6123
VFREG 4.8V
VFREG_4.8V
Q6124
ES
VF_CTL
Q6161
SW REG
C6173
D6161
D6162
Q6164
15V REG
REG_15V
Q6162
DIF AMP
Q6163
12V REG
REG_12V
C6167
D6164
D6163
Q6167
-15V REG
REG_-15V
Q6165
Q6166
-8V REG
REG_-8V
Q6201,Q6202
Q6203
LAMP_ON
LP_UNREG
CPU SECTION
E2 PROM
IC104
RESET
IC106
IC102
AL 3.2V
RCT
IC107
DA101
CPU
IC101
(H : ON L : OFF)
IC105
EVR
REG_4.8V
REG_3.2V
LITHIUM
CN26
Li+
JIG-CONN
CN25
AL_3.2V
VPP_7.8V
MECHA MDA SECTION
LM_UNREG
CTL AMP SECTION
PRE/REC SECTION
RF_4.8V
L3501
SPEAKER SECTION
SPK+
SPK-
VTR ASP SECTION
REG_12V
VTR DSP SECTION
IO_3.2V
CAMERA DSP SECTION
L4001
L5203
L5202
IRIS & AF/ZOOM SECTION
L4503
VF/MTIF SECTION
VFREG_4.8
R7808
L7801
LCD_3.2V
VF_BL_4.8
CN3
CAPSTAN MOTOR
M
CN7
CTL_ERS
CN27
SPEAKER
02 CCD
CCD_15V
CCD_-8V
CN22
07 MONITOR
CN16
CN7501
(HV)
HV
CN7503
(BL)
(LCD DRIVE)
(MONI_LCD)
CN7502
L7614
L7611
L7610
L7613
L7612
VEE
VSS
VGH
VDD
NOTE) L7610 : FOR GR-SXM26
L7613 : FOR GR-SXM46
CN15
OP_4.8V
OP BLOCK
50 E VF (B/W)
VF_BL_4.8
CN12
CN14
DC LIGHT
CN13
CN18
OPERATION UNIT
ZOOM UNIT
A
B
C
D
E
F
G
H
1
2
3
4
5

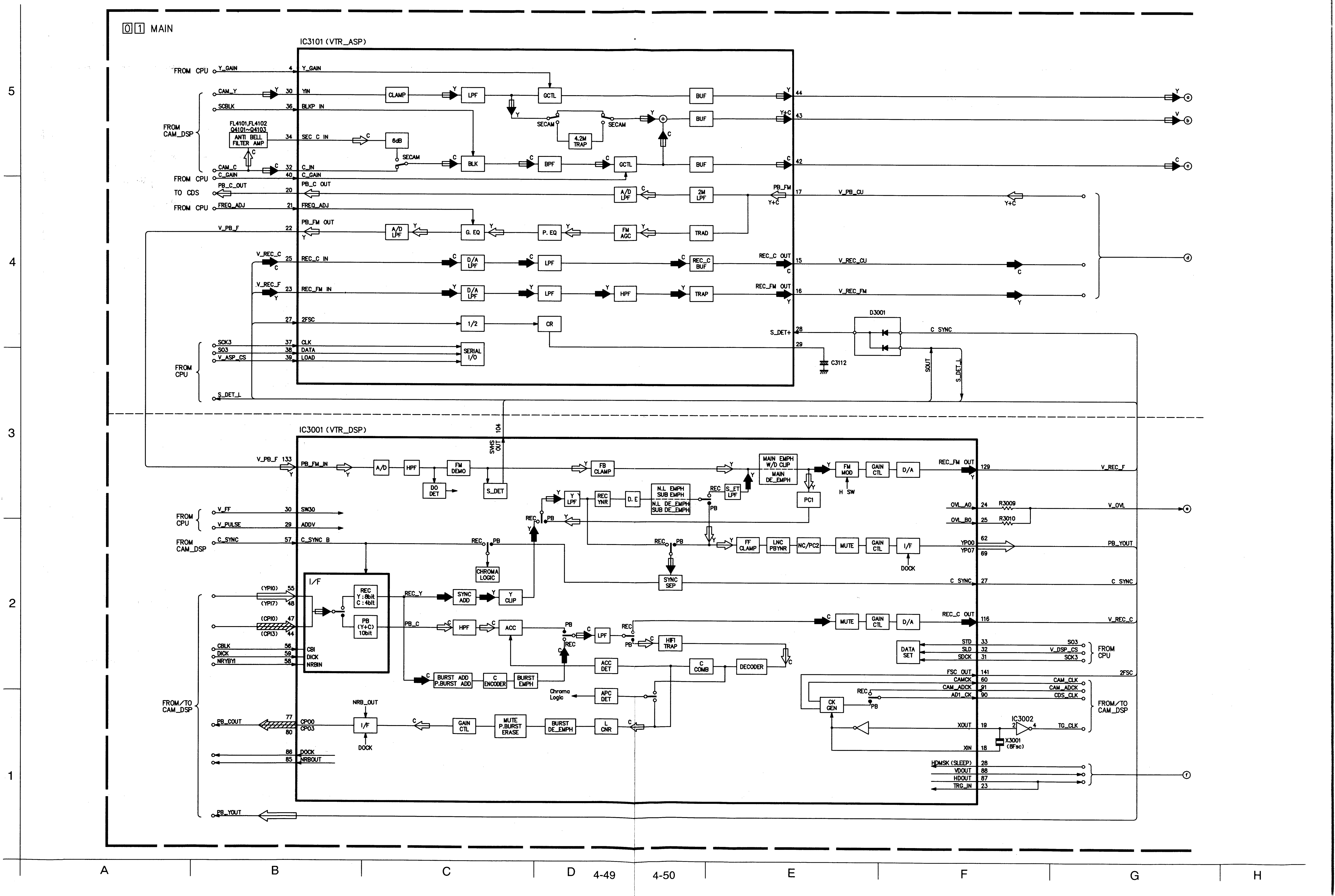
4.20 CAMERA BLOCK DIAGRAM



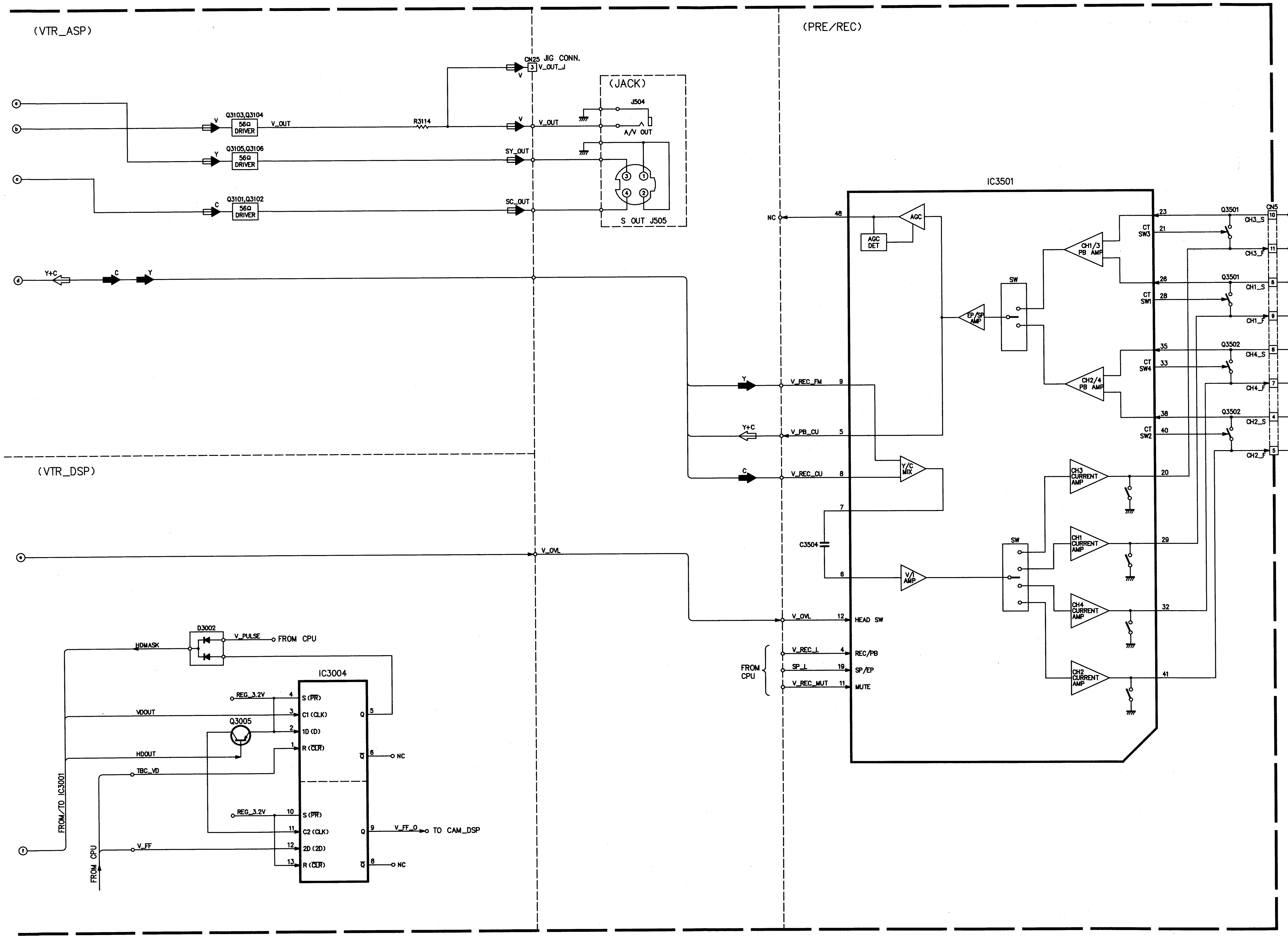
01 MAIN (CAMERA_DSP)
IC5201 (CDS/AGC/AD)
CDS
DC OFFSET
T. G
PGA
A/D CONV
LATCH
SERIAL INTERFACE
CDSIN
BLKSH
BLKFB
ADCIN
OBP
SPBLK
SPSIG
PBLK
SDATA
SCK
CS
ADCLK
D9 D8 D7 D6 D5 D4 D3 D2 D1 D0
AD9 AD8 AD7 AD6 AD5 AD4 AD3 AD2 AD1 AD0
R5202
C5212
C5213
V_PB_C
FROM VTR_ASP
IC4001 (CAMERA_DSP)
OB CLAMP
1H DL
Y/C SEPA (3LINE)
V/H APT CTL
PROCESS
RGB SEPA
WB
γ
G CTL
MATRIX
HDTG
VDTG
LHFO
ID
CLKI
TO VTR_DSP
CAM_CLK (8FSC)
02 CCD
CN22
CCD_OUT
Q5301
BUF
IC5301
CCD IMAGE SENSOR
V1 V2 V3 V4 SUB H1 H2
OPTICAL BLOCK
IC5202
(TG/V_DRIVER)
XSHP XSHD OBCLP PBLK
SSI SSK AHD VHD VGAT ID SEN DSGAT CK CLDCLK RST
SHP SHD OBCP PBLK
CDS_CLK
TG_CLK
CAM_ADCK
FROM/TO VTR_DSP
R5215
REG 3.2V
C5222
IRIS CTL
(CPU)
CDS_CS
SCK3
SO3
CCD_SCS
DSGAT
IC101 CPU
CDS_CS
CCD_CS
DSGAT
FOCUS_SENS
ZOOM_SENS
LENS_MDA_CLK
VD_H
SCK3
SO3
LENS_MDA_CS
DSP_RST
IRIS_O/C
HALL
IRIS_PWM
IR_FLICK
IR_A/D
AD0
AD15
LBEN (L) — LWE
UBEN (L) — HWE
R/W (L) — RW
DSTB (L) — STB
ASTB — DSTB
OMT — OMT
WAIT (L) — WAIT_L
V_FF — V_FF
VDVHS — VDVHS
FRP — CFM
HD — HD_H
VD — VD_H
FI — FI
OSD_CLK
OSD_CS
OSD_DATA
DSP_RST
X1
X2
X101 MAIN SYSTEM CLOCK (16MHz)
(IRIS & AF/ZOOM)
CN15
F_SENS
Z_SENS
FOCUS3 FOCUS1 FOCUS4 FOCUS2
ZOOM2 ZOOM4 ZOOM3 ZOOM1
IC4501
BRIDGE DRIVER
PULSE GENERATOR
SERIAL-PARARELLE DECODER
OSCIN VD SCLK SDATA LATCH RSET
LENS_CS
IC4201,IC4202
HALL AMP
MOTOR DRIVE AMP
HE_IN+ HE_OUT- HE_IN- HE_OUT+
GND DUMP- DRIVE+ DUMP+
R4209,C4206
LPF
(COMP)
REG 4.8V
Q4251
R4262
C4256
IC4251
AMP
IR_FLICK
IR_DC
a b c d e
5 4 3 2 1
A B C D E F G H


(CAMERA_DSP)
IC4001
VTR_DSP CONTROL INTERFACE
a
b
c
d
e
D/A CONV
Y
BUF
D/A CONV
B-Y
BUF
CLAMP
MOD
D/A CONV
R-Y
BUF
CLAMP
MOD
LPF
SUB CARRIER MODULE
LIM
BLK
BUF
BUF
162 YOUT
166 COUT
175 Y2OUT
167 RYOUT
176 BYOUT
Q4001
2 BUF 6
CAM_Y
Q4001
5 BUF 3
CAM_C
TO VTR_ASP
Q4004
BUF
YOUT2
LCD_Y
TO E_VF (B/W) MONITOR
Q4002
2 BUF 6
RYOUT
LCD_R-Y
5 BUF 3
BYOUT
LCD_B-Y
TO MONITOR
SCBLKO 59 SCBLK
CSYNCO 78 CSYNC
CBLKO 80 CBLK
DCKO 76 DICK
NRYBYO 77 NRYBO
TO VTR_ASP
DYO0 75
DYO7 66
DCO0 65
DCO3 62
DYI0 81
DYI7 90
DCI0 91
DCI3 94
NRYBYI 95 NRYBYI
DCKI 98 DOCK
CLKI 153 CAM_CLK
FROM/TO VTR_DSP
AD0
AD15
7 BUS0
25 BUS15
LWE 2 LBEN
HWE 4 UBEN
RW 5 RW
STB 6 ASTB
DSTB 1 DSTB
OMT 36 OMT
WAIT 37 BUSY
V_FF 40 VFF
VDVHS 208 VREFO
CFM 31 FRP
HD_H 28 HDCPU
VD_H 29 VDCPU
FI 30 FLDCPU
INTERFACE
185 CLR
FROM CPU DSP_RST
C
Y
C
Y
TMC0 TMC3
TMY0 TMY7
IE FMWE WAD
FMC0 FMC3
FMY0 FMY7
MCLK RAE RAD
122 126
112 121
133 135 132
108 111
99 106
127 136 129
42 39
7 43
32 34 37 38
27 31
15 25
8 13 9
IC4002
DIN8 (CIN0) C DIN11 (CIN3)
DIN0 (YIN0) Y DIN7 (YIN7)
IE WE WXAD WCLK
D08 (COUT0) C D11 (COUT3)
D00 (YOUT0) Y D07 (YOUT7)
RCLK RE RXAD
WRITE BUFFER
WRITE RESISTOR
DOUT BUFFER
READ RESISTOR
MEMORY CELL ARRAY
OSD I/F
BLK1 204 BLK_1 11 BLK1
BLK2 205 BLK_2 13 BLK2
VBLK 206 VBLK 15 VBLK
VB 203 VB 18 VB
VG 202 VG 17 VG
VR 199 VR 16 VR
VC1 197 VC_1 12 VC1
VC2 198 VC_2 14 VC2
CLKOSD 196 CLKOSD 8 OSCIN
IC4003 (OSD)
PCL 4 DSP_RST
DATA 3 OSD_DATA
CS 2 OSD_CS
CLK 1 OSD_CLK
FROM CPU

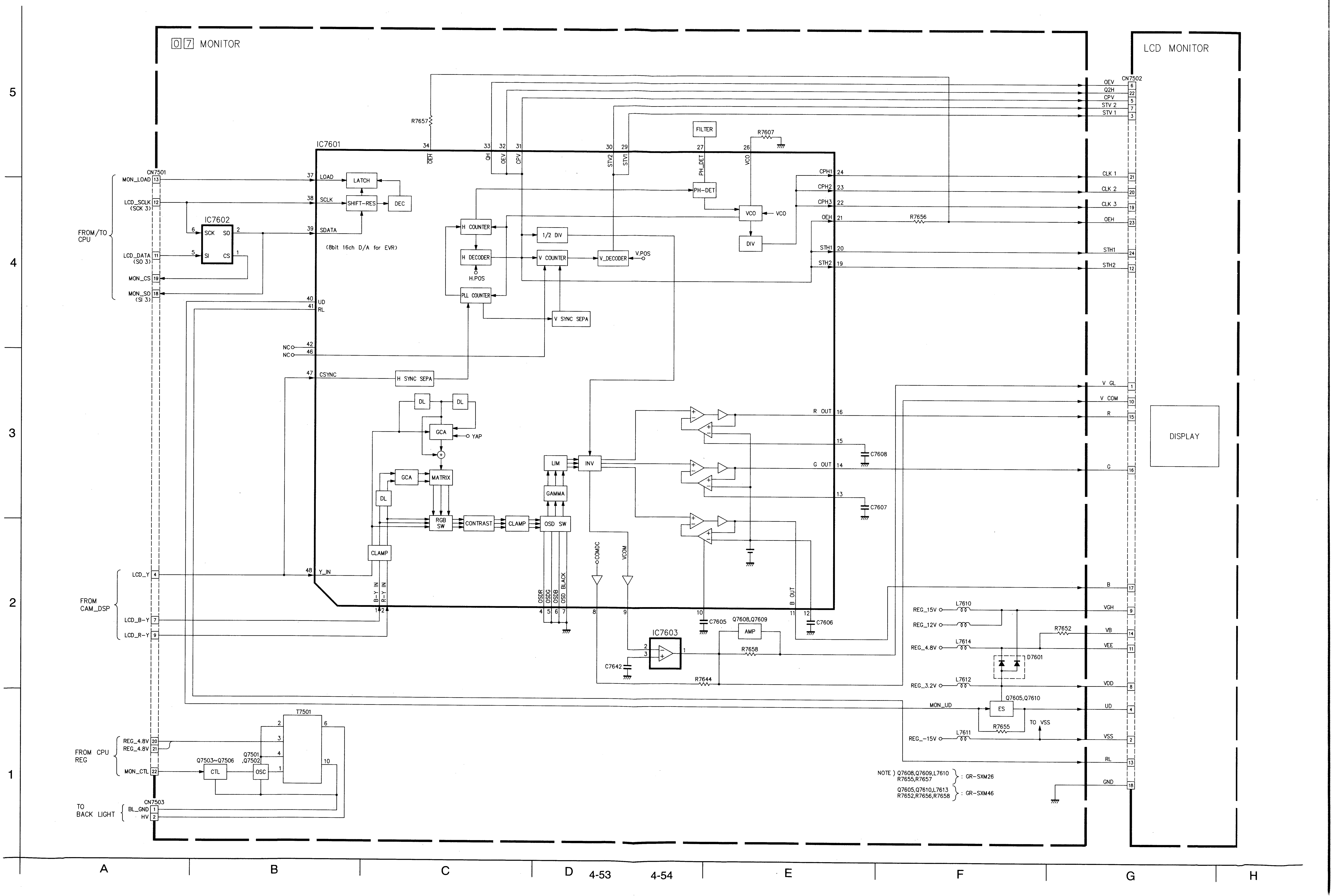
4.21 Y/C BLOCK DIAGRAM



01 MAIN
IC3101 (VTR_ASP)
IC3001 (VTR_DSP)
FROM CPU
FROM CAM_DSP
TO CDS
FROM/TO CAM_DSP
Y_GAIN
CAM_Y
SCBLK
FL4101,FL4102
Q4101~Q4103
ANTI BELL FILTER AMP
CAM_C
C_GAIN
PB_C_OUT
FREQ_ADJ
V_PB_F
V_REC_C
V_REC_F
SCK3
SO3
V_ASP_CS
S_DET_L
YIN
BLKP IN
SEC C IN
C_IN
PB_C OUT
PB_FM OUT
REC_C IN
REC_FM IN
2FSC
CLK
DATA
LOAD
CLAMP
LPF
GCTL
BUF
SECAM
4.2M TRAP
6dB
BLK
BPF
A/D LPF
2M LPF
G. EQ
P. EQ
FM AGC
TRAP
D/A LPF
REC_C BUF
HPF
1/2
CR
SERIAL I/O
REC_C OUT
REC_FM OUT
S_DET+
PB_FM
V_PB_CU
V_REC_CU
V_REC_FM
D3001
C SYNC
C3112
SOUT
S_DET_L
SVHS OUT
PB_FM_IN
A/D
FM DEMO
DO DET
S_DET
FB CLAMP
MAIN EMPH W/D CLIP
MAIN DE_EMPH
FM MOD
H SW
GAIN CTL
D/A
V_REC_F
Y LPF
REC YNR
D. E
N.L EMPH SUB EMPH
N.L DE_EMPH SUB DE_EMPH
REC S_ET LPF
PC1
OVL_A0
OVL_B0
R3009
R3010
V_OVL
V_FF
V_PULSE
SW30
ADDV
C_SYNC
C_SYNC B
CHROMA LOGIC
FF CLAMP
LNC PBYNR
NC/PC2
MUTE
I/F
DOCK
YP00
YP07
PB_YOUT
SYNC SEP
(YPI0)
(YPI7)
(CPI0)
(CPI3)
CBLK
DICK
NRBYBI
CBI
NRBIN
REC Y: 8bit C: 4bit
PB (Y+C) 10bit
REC_Y
PB_C
SYNC ADD
Y CLIP
ACC
HIFI TRAP
ACC DET
C COMB
DECODER
BURST ADD P.BURST ADD
C ENCODER
BURST EMPH
Chroma Logic
APC DET
REC_C OUT
V_REC_C
DATA SET
STD
SLD
SDCK
V_DSP_CS
FSC OUT
CAMCK
CAM_ADCK
AD1_CK
CAM_CLK
CDS_CLK
CK GEN
XOUT
XIN
IC3002
TG_CLK
X3001 (8Fsc)
NRB_OUT
PB_COUT
CP00
CP03
GAIN CTL
MUTE P.BURST ERASE
BURST DE_EMPH
L CNR
NRBOUT
HDMSK (SLEEP)
VDOUT
HDOUT
TRG_IN
A
B
C
D
E
F
G
H
1
2
3
4
5


(VTR_ASP)
(VTR_DSP)
(PRE/REC)
a
b
c
d
e
f
CN25 JIG CONN.
3 V_OUT_J
V
(JACK)
J504
A/V OUT
V_OUT
V
Q3103,Q3104
56Ω DRIVER
V_OUT
R3114
Y
Q3105,Q3106
56Ω DRIVER
SY_OUT
C
Q3101,Q3102
56Ω DRIVER
SC_OUT
S OUT J505
Y+C
C
Y
V_OVL
D3002
HDMASK
V_PULSE
FROM CPU
IC3004
REG_3.2V
4 S (PR)
VDOUT
3 C1 (CLK)
Q3005
2 1D (D)
HDOUT
1 R (CLR)
TBC_VD
Q 5
Q 6
NC
REG_3.2V
10 S (PR)
11 C2 (CLK)
V_FF
12 2D (2D)
13 R (CLR)
Q 9
V_FF_O
TO CAM_DSP
Q 8
NC
FROM/TO IC3001
FROM CPU
IC3501
NC
48
AGC
AGC DET
EP/SP AMP
SW
CH1/3 PB AMP
CH2/4 PB AMP
Y
V_REC_FM 9
Y+C
V_PB_CU 5
C
V_REC_CU 8
Y/C MIX
7
C3504
6
V/I AMP
SW
CH3 CURRENT AMP
CH1 CURRENT AMP
CH4 CURRENT AMP
CH2 CURRENT AMP
V_OVL 12 HEAD SW
FROM CPU
V_REC_L 4 REC/PB
SP_L 19 SP/EP
V_REC_MUT 11 MUTE
23
CT SW3 21
26
CT SW1 28
35
CT SW4 33
38
CT SW2 40
20
29
32
41
Q3501
Q3501
Q3502
Q3502
CN5
CH3_S 10
CH3_F 11
CH1_S 8
CH1_F 9
CH4_S 6
CH4_F 7
CH2_S 4
CH2_F 5
R/T
VIDEO HEAD
CH3
CH1
CH4
CH2

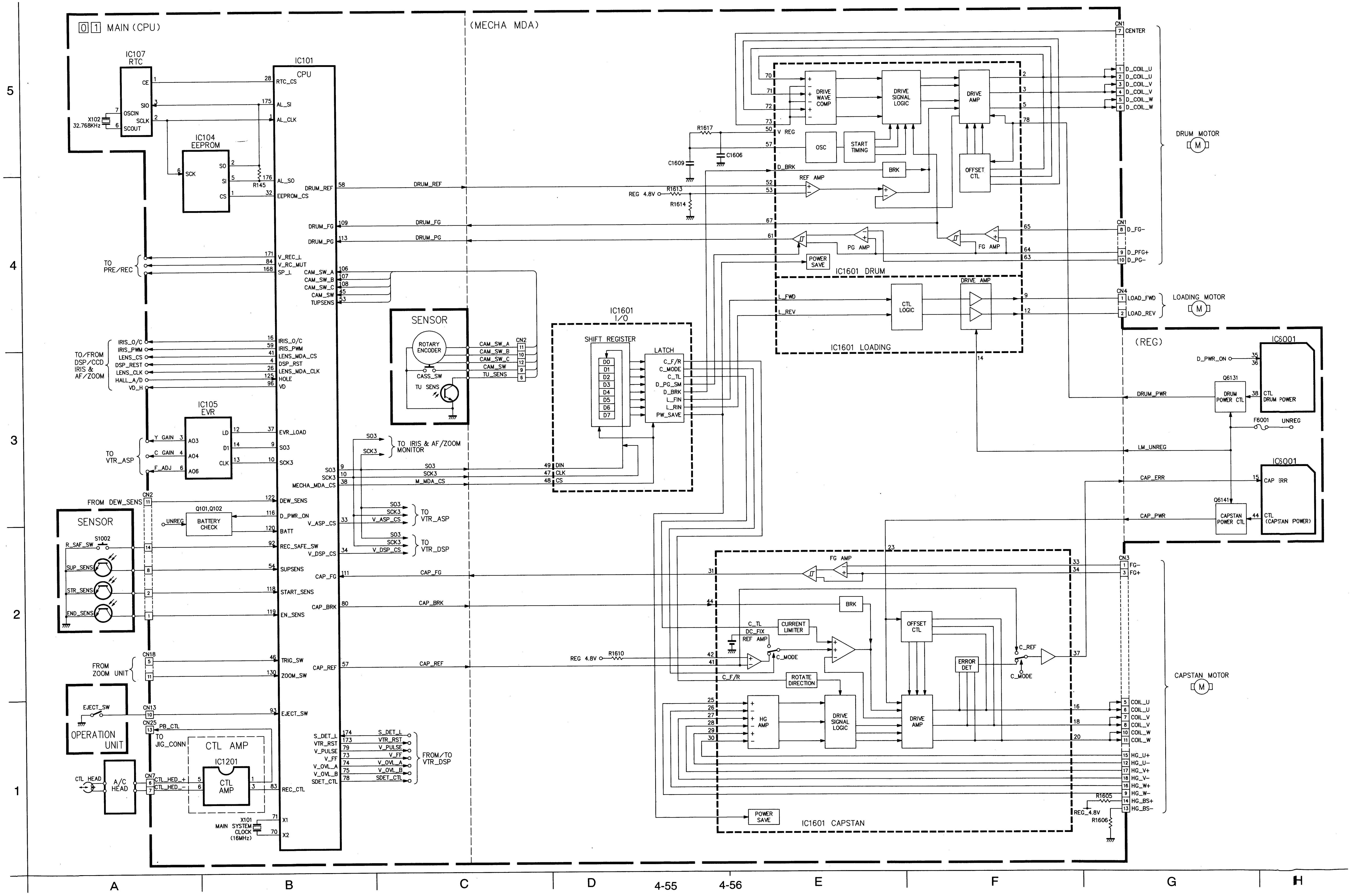
4.22 MONITOR BLOCK DIAGRAM



07 MONITOR
LCD MONITOR
DISPLAY
IC7601
IC7602
IC7603
CN7501
CN7502
CN7503
FROM/TO CPU
MON_LOAD 13
LCD_SCLK (SCK 3) 12
LCD_DATA (SO 3) 11
MON_CS 19
MON_SO (SI 3) 18
SCK SO SI CS
37 LOAD
38 SCLK
39 SDATA
LATCH
SHIFT-RES
DEC
(8bit 16ch D/A for EVR)
40 UD
41 RL
NC 42
NC 46
47 CSYNC
48 Y_IN
R7657
34 OEH
33 QH
32 OEV
31 CPV
30 STV2
29 STV1
27 PH_DET
26 VCO
FILTER
R7607
PH-DET
VCO
DIV
H COUNTER
H DECODER
H.POS
PLL COUNTER
1/2 DIV
V COUNTER
V_DECODER
V.POS
V SYNC SEPA
H SYNC SEPA
CPH1 24
CPH2 23
CPH3 22
OEH 21
STH1 20
STH2 19
R7656
DL
GCA
YAP
MATRIX
RGB SW
CONTRAST
CLAMP
OSD SW
GAMMA
LIM
INV
R OUT 16
15
G OUT 14
13
C7608
C7607
B OUT 11 12
C7606
10 C7605
COMDC 8
VCOM 9
OSDR 4
OSDG 5
OSDB 6
OSD BLACK 7
B-Y IN 1
R-Y IN 2
FROM CAM_DSP
LCD_Y 4
LCD_B-Y 7
LCD_R-Y 9
Q7608,Q7609
AMP
R7658
C7642
R7644
OEV 6
Q2H 22
CPV 5
STV 2 7
STV 1 3
CLK 1 21
CLK 2 20
CLK 3 19
OEH 23
STH1 24
STH2 12
V GL 1
V COM 10
R 15
G 16
B 17
VGH 9
VB 14
VEE 11
VDD 8
UD 4
VSS 2
RL 13
GND 18
REG_15V
REG_12V
REG_4.8V
REG_3.2V
REG_-15V
L7610
L7614
L7612
L7611
R7652
D7601
MON_UD
ES
Q7605,Q7610
R7655
TO VSS
FROM CPU REG
REG_4.8V 20
REG_4.8V 21
MON_CTL 22
Q7503~Q7506
CTL
Q7501,Q7502
OSC
T7501
TO BACK LIGHT
BL_GND 1
HV 2
5
4
3
2
1
A
B
C
D
E
F
G
H

NOTE) Q7608,Q7609,L7610 R7655,R7657 } : GR-SXM26
Q7605,Q7610,L7613 R7652,R7656,R7658 } : GR-SXM46

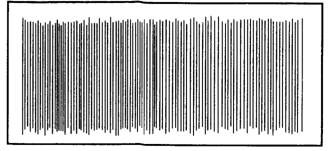
4.23 CPU/MDA BLOCK DIAGRAM


0 1 MAIN (CPU)
(MECHA MDA)
IC107 RTC
CE
SIO
SCLK
OSCIN
SCOUT
X102 32.768KHz
IC101 CPU
RTC_CS
AL_SI
AL_CLK
AL_SO
EEPROM_CS
IC104 EEPROM
SCK
SO
SI
CS
R145
DRUM_REF
DRUM_FG
DRUM_PG
TO PRE/REC
V_REC_L
V_RC_MUT
SP_L
CAM_SW_A
CAM_SW_B
CAM_SW_C
CAM_SW
TUPSENS
SENSOR
ROTARY ENCODER
CASS_SW
TU SENS
CN2
TU_SENS
TO/FROM DSP/CCD IRIS & AF/ZOOM
IRIS_O/C
IRIS_PWM
LENS_CS
DSP_REST
LENS_CLK
HALL_A/D
VD_H
LENS_MDA_CS
DSP_RST
LENS_MDA_CLK
HOLE
VD
IC105 EVR
TO VTR_ASP
Y GAIN
C GAIN
F_ADJ
A03
A04
A06
LD
D1
CLK
EVR_LOAD
SO3
SCK3
TO IRIS & AF/ZOOM MONITOR
MECHA_MDA_CS
M_MDA_CS
IC1601 I/O
SHIFT REGISTER
LATCH
D0
D1
D2
D3
D4
D5
D6
D7
C_F/R
C_MODE
C_TL
D_PG_SM
D_BRK
L_FIN
L_RIN
PW_SAVE
DIN
CLK
CS
FROM DEW_SENS
CN2
DEW_SENS
Q101,Q102
BATTERY CHECK
UNREG
D_PWR_ON
BATT
V_ASP_CS
V_DSP_CS
TO VTR_ASP
TO VTR_DSP
V_ASP_CS
V_DSP_CS
SENSOR
R_SAF_SW
S1002
SUP_SENS
STR_SENS
END_SENS
REC_SAFE_SW
SUPSENS
START_SENS
EN_SENS
CAP_FG
CAP_BRK
CAP_REF
FROM ZOOM UNIT
CN18
TRIG_SW
ZOOM_SW
EJECT_SW
CN13
OPERATION UNIT
CN25
PB_CTL
TO JIG_CONN
CTL AMP
IC1201
CTL AMP
CN7
CTL HEAD
A/C HEAD
CTL_HED_+
CTL_HED_-
REC_CTL
X101 MAIN SYSTEM CLOCK (16MHz)
X1
X2
S_DET_L
VTR_RST
V_PULSE
V_FF
V_OVL_A
V_OVL_B
SDET_CTL
FROM/TO VTR_DSP
CN1
CENTER
D_COIL_U
D_COIL_V
D_COIL_W
DRUM MOTOR
M
V REG
R1617
C1606
C1609
D_BRK
REF AMP
R1613
REG 4.8V
R1614
DRIVE WAVE COMP
DRIVE SIGNAL LOGIC
DRIVE AMP
OSC
START TIMING
BRK
OFFSET CTL
PG AMP
FG AMP
POWER SAVE
IC1601 DRUM
D_FG-
D_PFG+
D_PG-
DRIVE AMP
CTL LOGIC
L_FWD
L_REV
CN4
LOADING_FWD
LOADING_REV
LOADING MOTOR
IC1601 LOADING
(REG)
IC6001
D_PWR_ON
Q6131
DRUM POWER CTL
CTL DRUM POWER
DRUM_PWR
F6001
UNREG
LM_UNREG
IC6001
CAP ERR
CAP_ERR
Q6141
CAPSTAN POWER CTL
CTL (CAPSTAN POWER)
CAP_PWR
FG AMP
CN3
FG-
FG+
BRK
C_TL
DC_FIX
REF AMP
CURRENT LIMITER
OFFSET CTL
C_MODE
C_REF
ERROR DET
REG 4.8V
R1610
C_F/R
ROTATE DIRECTION
HG AMP
DRIVE SIGNAL LOGIC
DRIVE AMP
CAPSTAN MOTOR
M
COIL_U
COIL_V
COIL_W
HG_U+
HG_U-
HG_V+
HG_V-
HG_W+
HG_W-
HG_BS+
HG_BS-
R1605
REG_4.8V
R1606
POWER SAVE
IC1601 CAPSTAN
5
4
3
2
1
A
B
C
D
E
F
G
H

4.24 WAVEFORMS

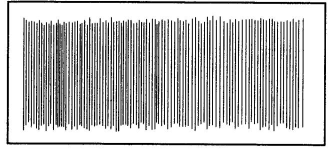
- VTR DSP -

WF1 IC3001-129



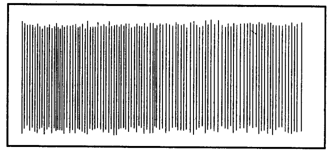
REC 0.76 Vp-p
20mV/10μse/DIV

WF2 IC3001-116



REC 0.46 Vp-p
10mV/10msec/DIV

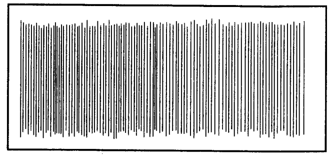
WF3 IC3001-133



PB 0.9 Vp-p
50mV/10μsec/DIV

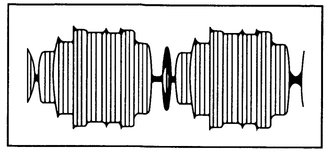
- VTR ASP -

WF1 IC3101-16



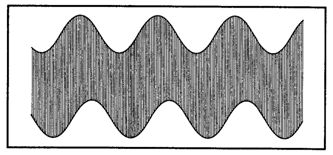
REC 0.3 Vp-p
10mV/10μsec/DIV

WF2 IC3101-15



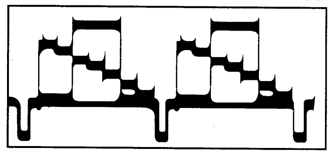
REC 0.2 Vp-p
10mV/10μsec/DIV

WF3 IC3101-17



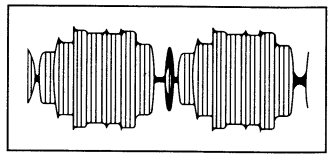
PB 0.4 Vp-p
10mV/10μsec/DIV

WF4 IC3101-30



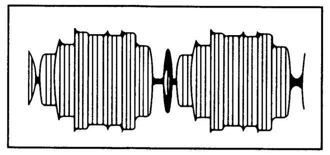
REC 0.84 Vp-p
PB 0.8 Vp-p
20mV/10μsec/DIV

WF5 IC3101-32



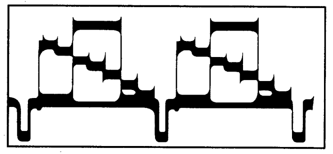
REC/PB 0.65 Vp-p
10mV/10μsec/DIV

WF6 IC3101-42



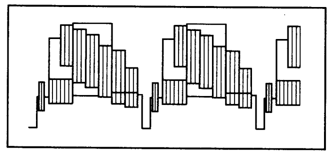
REC 1.5 Vp-p
PB 1.6 Vp-p
20mV/20μsec/DIV

WF7 IC3101-44



REC 2.1 Vp-p
PB 2.3 Vp-p
50mV/20μsec/DIV

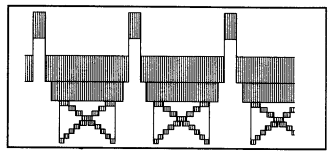
WF8 IC3101-43



REC 2.4 Vp-p
PB 2.2 Vp-p
50mV/20μsec/DIV

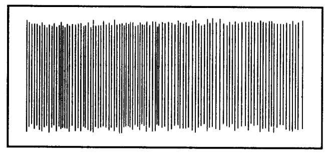
- CAMERA DSP -

WF1 IC5201-26



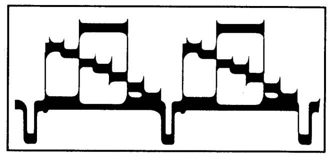
EE 1.5 Vp-p
20mV/20μsec/DIV

WF2 IC5201-27



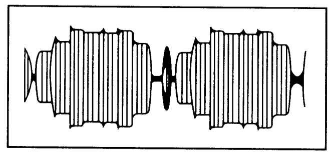
PB 0.6 Vp-p
50mV/0.5mV/DIV

WF3 IC4001-162



REC 0.88 Vp-p
PB 0.8 Vp-p
20mV/10μsec/DIV

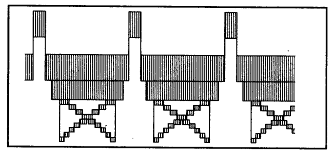
WF4 IC4001-166



REC 0.75 Vp-p
PB 0.7 Vp-p
10mV/10μsec/DIV

- CCD -

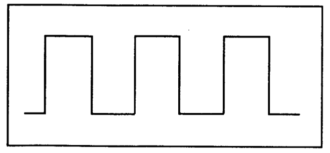
WF1 Q5301-B



EE 1.5 Vp-p
20mV/20μsec/DIV

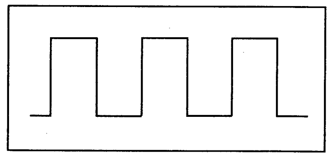
- CPU -

WF1 IC101-109



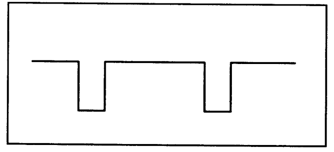
REC/PB 3.2 Vp-p
0.1V/0.5msec/DIV

WF2 IC101-111



REC/PB 3.2 Vp-p
0.1V/0.1msec/DIV

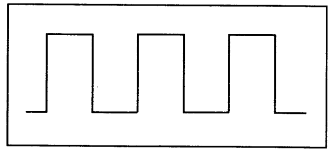
WF3 IC101-113



REC/PB 3.2 Vp-p
0.1V/5msec/DIV

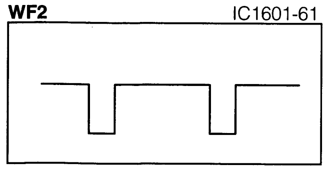
- MECHA MDA-

WF1 IC1601-31



REC/PB 3.2 Vp-p
0.1V/0.1msec/DIV

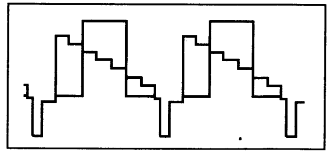
WF2 IC1601-61



REC/PB 3.2 Vp-p
0.1V/5msec/DIV

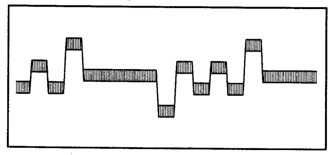
- MONITOR -

WF1 IC7601-48



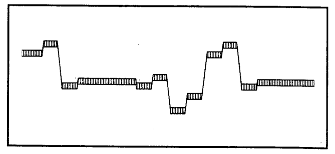
EE 0.9 Vp-p
20mV/10μsec/DIV

WF2 IC7601-1



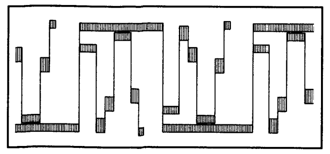
EE 0.27 Vp-p
10mV/10μsec/DIV

WF3 IC7601-2



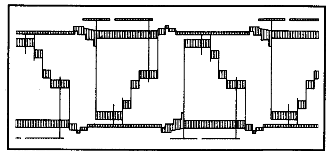
EE 0.25 Vp-p
10mV/10μsec/DIV

WF4 IC7601-16



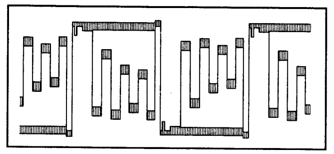
EE4.0 Vp-p
0.1V/20μsec/DIV

WF5 IC7601-14



EE 4.0 Vp-p
0.1V/20μsec/DIV

WF6 IC7601-11



EE 4.2 Vp-p
0.1mV/20μsec/DIV

4.25 VOLTAGE CHARTS

<CPU>

MODE PIN NO.	REC	PLAY
IC101		
1	3.2	3.2
2	3.2	3.2
3	3.2	3.2
4	3.2	3.2
5	0	0
6	0	0
7	3.2	3.2
8	3.2	3.2
9	0.9	0.7
10	0	0
11	3.1	3.1
12	1.4	1.4
13	3.2	3.2
14	0	0
15	0	0
16	1.6	0
17	0	0
18	3.2	3.2
19	3.2	0
20	0	0
21	3.2	0
22	0	0
23	0	0
24	2.5	2.5
25	2.9	2.9
26	1.6	1.6
27	3.2	3.2
28	0	0
29	1.6	1.6
30	0	0
31	2.3	2.3
32	3.2	3.2
33	3.2	3.2
34	3.2	3.2
35	3.2	3.2
36	0	0
37	0	0
38	0	0
39	3.2	3.2
40	0	0
41	0	0
42	3.2	3.2
43	0	0
44	3.1	3.2
45	0	0
46	2.7	2.7
47	2.6	2.6
48	2.6	2.6
49	2.7	0
50	3	2.7
51	0	2.6
52	2.9	2.7
53	-	2.8
54	-	-
55	0	0
56	0	0
57	1.7	1.7
58	1.5	1.5
59	1.6	0
60	0	0
61	0	0
62	0	0
63	0	0
64	0	0
65	0	0
66	3.2	3.2
67	3.2	3.2
68	0	0
69	3.2	3.2
70	1.6	1.6
71	1.3	-
72	0	0
73	1.6	1.6
74	0	0
75	0	0
76	0	0
77	0	0
78	0	0
79	0	0
80	0	0
81	3.2	3.2
82	0	0
83	1.9	0
84	0	3.2
85	3.2	0
86	3.2	0
87	3.2	0
88	0	0
89	0	0
90	3.2	3.2
91	3.2	0
92	3	3.2
93	3	3
94	3.2	3.2
95	0	0
96	0	0
97	0	0
98	3.2	3.2
99	3.2	3.2
100	0	0.6
101	3	2.6
102	3.2	3.2
103	1.6	1
104	2.6	2.6
105	0	0
106	0	0
107	3.2	3.1
108	3.1	3.1
109	1.5	1.6
110	0	0
111	1.4	1.5
112	1.9	1.9
113	2.8	2.9
114	0	0
115	0	0
116	3.2	3.2
117	2.3	2.7
118	3.2	3.2
119	3.2	3.2
120	2.1	2.1
121	2.9	2.9
122	0	0
123	0	0
124	0	0
125	1.6	0.5
126	3.1	3.2
127	0	0
128	3.2	3.2
129	1.9	1
130	1.6	1.6
131	2.6	3
132	3.1	3.1
133	3.2	3.2
134	0	0
135	3.2	3.2
136	3.2	3.2
137	0	0
138	0	0
139	0	0
140	3.2	3.2
141	3.2	3.2
142	3.2	3.2
143	0	0
144	0	0
145	0.8	0.7
146	0.8	0.7
147	0.7	0.6
148	0.8	0.6
149	0.7	0.7
150	0.6	0.6
151	0.6	0.6
152	0.6	0.5
153	3.2	3.2
154	0	0
155	0.7	0.9
156	0.7	0.9
157	0.6	0.7
158	0.7	0.7
159	0.7	0.5
160	1.1	0.4
161	1.1	0.5
162	1	0.4
163	3.2	3.2
164	3.2	3.2
165	3.2	3.2
166	3.2	0
167	0	0
168	0	0
169	0	0
170	3.1	3.1
171	0	3.2
172	0	3.2
173	0	0
174	0	3.1
175	0	3.2
176	0	3.2
IC102		
1	3.3	3.3
2	0	0
3	6.8	6.8
IC104		
1	3.2	3.2
2	0	0
3	0.7	3.2
4	0	0
5	0.5	0
6	3.2	0
7	0.5	3.2
8	3.2	3.2
IC105		
1	0	0
2	2.1	2.1
3	2	2
4	1.1	1.1
5	3.2	1.4
6	3.2	1.4
7	3	3
8	3.2	3.2
9	3.2	3.2
10	0	0
11	2.3	1.9
12	0	0
13	3.1	3.1
14	0.9	0.8
15	2.1	2.1
16	0	0
IC106		
1	0	0
2	0	0
3	3.2	3.2
4	3.2	3.2
IC107		
1	0	0
2	3.2	3.2
3	0	3.2
4	0	0
5	0	0
6	0.8	0.5
7	1.1	0.6
8	3.1	3.1
IC1801		
1	3	3
2	0	0
3	4.8	4.8
Q101		
E	6.8	6.8
C	6.8	6.8
B	6	6
Q102		
E	0	0
C	0	0
B	3.2	3.2
Q103		
E	0	0
C	0	4.8
B	0.6	0
Q104		
E	0	0
C	4.6	4.6
B	0	0
Q105		
E	4.8	4.8
C	-7.5	-5.5
B	4.8	4.8
Q106		
E	0	0
C	0	0
B	3	3.2
Q107		
E	4.8	4.8
C	4.8	4.8
B	0	0
Q110		
E	0	0
C	0	0
B	3.2	3.2

<CTL AMP>

MODE PIN NO.	REC	PLAY
IC1201		
1	1.8	1.8
2	3.2	0
3	1.9	0
4	0	0
5	0.6	1.7
6	0.4	1.7
7	0.5	0
8	1.7	1.2
9	1.7	1.7
10	2	1.1
11	0	0
12	0	0.9
13	0.8	0.8
14	3.2	3.2

<SPEAKER>

MODE PIN NO.	REC	PLAY
IC2401		
1	1.4	1.3
2	3.2	3.2
3	1.3	1.3
4	0	0
5	0.9	0.6
6	0	0
7	0	0
8	0.5	0.6

<MECHA MDA>

MODE PIN NO.	REC	PLAY
IC1601		
1	0	0
2	1.4	1.4
3	1.4	1.5
4	0	0
5	1.5	1.5
6	0	0
7	0	0
8	0	0
9	0.8	2
10	0	0
11	0	0
12	0.5	2
13	0	0
14	6.7	6.7
15	0	0
16	2.4	0.8
17	0	0
18	0.9	0.8
19	0	0
20	0	0.8
21	0	1.2
22	0	1.1
23	2	3.2
24	6.7	6.8
25	2.4	2.4
26	2.4	2.4
27	2.4	2.4
28	2.4	2.4
29	2.4	2.4
30	2.4	2.4
31	1.6	1.6
32	2.4	2.4
33	2.4	2.4
34	2.4	2.4
35	4.8	4.8
36	3.2	3.2
37	1.1	1.1
38	0.6	0.6
39	0.6	0.6
40	1.2	1.2
41	1.7	1.7
42	4.8	4.8
43	4.8	4.8
44	0	0
45	0	0
46	0	0
47	3.1	3.1
48	0	0
49	0.8	0.7
50	2	2
51	0	0
52	1.5	1.5
53	1.3	1.3
54	4.6	4.8
55	0.6	0.6
56	0.6	0.6
57	0	1
58	0	0.6
59	0	0
60	1.7	1.7
61	2.9	2.9
62	1.9	2
63	2.5	2.5
64	2.3	2.5
65	2.5	2.5
66	2.4	2.5
67	1.6	1.6
68	1.9	1.9
69	0	0
70	1.5	1.5
71	1.5	1.5
72	1.5	1.5
73	1.5	1.5
74	1.5	1.5
75	0.4	0.4
76	3.9	3.9
77	6.8	6.8
78	3.9	4
79	0	0
80	0	0

<VTR DSP>

MODE PIN NO.	REC	PLAY
IC3001		
1	3.2	3.2
2	3.2	3.2
3	0	0
4	1.9	1.8
5	0	0
6	0	0
7	0	0
8	0	0
9	0	0
10	0	0
11	0	0
12	0	0
13	3.2	3.2
14	1.9	1.8
15	0	0
16	0	0
17	3.2	3.2
18	1.5	1.5
19	1.5	1.4
20	0	0
21	0	0
22	0	0
23	2.9	3
24	0	0
25	0	0
26	0	0
27	0	0
28	0	0
29	0	0
30	1.6	1.6
31	3.1	3.1
32	3.2	3.2
33	0.6	0.7
34	3.2	3.2
35	3.2	3.2
36	3.2	3.2
37	0	0
38	0	0
39	0	0
40	0	0
41	0	0
42	0	0
43	0	0
44	1.5	0
45	0.8	0
46	0.9	1.6
47	0.9	1.5
48	0.8	1.5
49	0.7	1.5
50	0.8	1.5
51	0.6	1.5
52	1.2	1.6
53	1.5	1.6
54	1.8	1.5
55	1.2	1.5
56	2.4	2.4
57	2.9	2.9
58	1.5	1.5
59	1.6	1.6
60	1.3	1.3
61	3.2	1.5
62	1.1	1.6
63	1.3	1.1
64	1.1	2.6
65	1	0.6
66	0.1	0.6
67	0.7	2.1
68	2	1.2
69	1.2	1.8
70	1.9	0
71	1.9	0
72	0	0
73	0	0
74	0	0
75	0	0
76	0	0
77	1	1.7
78	0.9	1.6
79	1	1.5
80	1.6	1.5
81	0	0
82	0	0
83	0	0
84	0	0
85	1.5	1.6
86	1.4	1.4
87	2.9	2.9
88	3.2	3.2
89	0	0
90	1.6	1.5
91	1.6	1.6
92	1.3	1.3
93	0	0
94	0	0
95	0	0
96	0	0
97	0	0
98	0	0
99	0	0
100	0	0
101	0	0
102	0	0
103	0	0
104	0	3.2
105	3.2	3.2
106	0	0
107	0	0
108	0	0
109	3.2	3.2
110	3.2	3.2
111	0	0
112	1.9	1.8
113	1.9	1.8
114	0	0
115	3.2	0
116	0	0
117	0.8	0
118	1.2	1.3
119	2	1.9
120	0	0
121	0	0
122	0.8	0
123	3.2	3.2
124	0	0
125	0	0
126	1	0
127	1.8	3.2
128	1.8	1.8
129	0	0
130	3.2	1
131	0	0
132	3.2	3.2
133	1.5	1.5
134	1.5	1.5
135	2.2	2.2
136	3.2	3.2
137	0.8	0.8
138	3.2	3.2
139	0	0
140	0	0
141	1.5	1.5
142	3.2	3.2
143	3.2	3.2
144	3.2	3.2
IC3002		
1	0	0
2	1.5	1.5
3	0	0
4	1.7	1.7
5	3.2	3.2
IC3004		
1	–	–
2	–	–
3	–	–
4	–	–
5	–	–
6	–	–
7	–	–
8	–	–
9	–	–
10	–	–
11	–	–
12	–	–
13	–	–
14	–	–
Q3002		
1	0.8	0.5
2	1.4	1.4
3	3.2	3.2
4	2.2	2.2
5	2.9	2.9
6	3.2	3.2
Q3003		
E	2	2
C	1.9	1.9
B	1.3	1.3
Q3004		
E	0	0
C	0.4	0.4
B	1.3	1.3
Q3005		
E	–	–
C	–	–
B	–	–

<PRE/REC>

MODE PIN NO.	REC	PLAY
IC3501		
1	1.2	0
2	0.5	0
3	2.4	2.4
4	0	3.2
5	4.4	2.6
6	1.5	0
7	1.7	2.4
8	2.3	2.3
9	2.3	2.3
10	3.1	3.1
11	0	0
12	0	0
13	0	0
14	0	0
15	0	0
16	3	1.8
17	3	2.9
18	0	0
19	0	0
20	4	0
21	3.3	0.6
22	4	0
23	0	0.6
24	0	0
25	0	0
26	0	0.6
27	4	0
28	3.8	0.6
29	4	0
30	4.7	0
31	4.7	0
32	4	0
33	–	0.6
34	4	0
35	0	0.6
36	0	0
37	0	0.7
38	0	0.6
39	4	0
40	–	0.5
41	4	0
42	3	-0.7
43	0	0
44	4.8	4.8
45	0	0
46	2.3	0
47	3.8	2.6
48	4.2	2.4
IC3901		
1	2	0
2	2	0
3	0	0
4	0	0
5	4	0
6	2	0
7	2	0
8	4	0
Q3501		
1	4	0
2	4	0.5
3	4	0
4	4	0
5	–	0.5
6	4	0
Q3502		
1	4	0
2	-0.6	
3	4	0
4	0	0
5	-0.6	
6	4	0
Q3506		
E	0	0
C	0	0
B	0	3.2
Q3901		
E	4.8	4.8
C	4.7	-3.1
B	0	4.8
Q3902		
E	0	0
C	4.8	4.8
B	3.2	0
Q3903		
E	1.6	0
C	4.7	-3.1
B	4.7	3.1
Q3904		
E	0	0
C	2	0
B	0	3.1

<VTR ASP>

MODE PIN NO.	REC	PLAY
IC2001		
1	1.5	3.2
2	1.5	0
3	1.5	0
4	1.4	3.2
5	1.5	3.2
6	1.5	0
7	0	0
8	1.5	0
9	1.5	3.2
10	1.5	0
11	1.4	1.3
12	0	0
13	1.4	1.3
14	3	3.2
IC3101		
1	3.1	1.4
2	2.4	2.4
3	2.4	2.4
4	2.4	2.5
5	0	0.4
6	0	0
7	2.2	2.4
8	0	0
9	2.4	2.4
10	2.7	2.5
11	2.8	2.5
12	0	2.5
13	4.8	4
14	0	0
15	2.9	1.4
16	2.3	1.5
17	2.2	2.1
18	0	2.1
19	4.8	4.8
20	0.9	2.2
21	0	2.3
22	2.9	2.3
23	2.9	2.2
24	0	0
25	2.8	0.5
26	2.9	2.8
27	2.8	0.6
28	0	2.6
29	2.5	2.5
30	1.9	2
31	0	0
32	2.8	2.8
33	0	0.7
34	2.9	2.9
35	0	0.6
36	3.2	3.2
37	3.1	3.1
38	0.9	0.7
39	3.2	3.2
40	1.1	1.1
41	2	2
42	2.1	2.1
43	2.5	2.5
44	2.5	2.5
45	0	2.4
46	4.8	4.8
47	2.5	2.5
48	2.4	2.4
Q2001		
E	3	3.2
C	1.4	3.2
B	3.2	0.9
Q2006		
E	0	0
C	0	0
B	0	0
Q2007		
1	-10.4	0
2	-16.8	0.7
3	0	0
4	-10.7	0
5	-16.7	0.7
6	0	0

<CAMERA DSP>

MODE PIN NO.	REC	PLAY
Q2008		
1	3	1.8
2	3.2	1.2
3	3.2	1.2
4	3	1.8
5	3.2	1.2
6	-16.8	0.8
Q2061		
E	0	0
C	0	0
B	0.6	0.6
Q2071		
E	11.6	11.6
C	12.2	12.3
B	12.1	12.1
Q2072		
1	4.2	4.2
2	4.7	4.8
3	11.6	11.7
4	10.4	10.4
5	11	11
6	11	11
Q3101		
1	1.5	1.5
2	2.1	2.1
3	4.8	4.8
4	2.1	2.1
5	2.8	2.8
6	4.8	4.8
Q3102		
1	2.8	2.8
2	2.1	2.1
3	0	0
4	2.1	2.1
5	1.5	1.5
6	0	0
Q3103		
1	1.9	2
2	2.5	2.6
3	4.8	4.8
4	2.5	2.6
5	3.1	3.2
6	4.8	4.8
Q3104		
1	3.1	3.2
2	2.5	2.6
3	0	0
4	2.5	2.6
5	1.8	1.9
6	0	0
Q3105		
1	1.8	1.9
2	2.4	2.6
3	4.8	4.8
4	2.5	2.5
5	3.1	3.2
6	4.8	4.8
Q3106		
1	3.1	3.2
2	2.5	2.5
3	0	0
4	2.5	2.5
5	1.9	1.9
6	0	0
Q4101		
E	1.7	1.7
C	0	0
B	1.1	1.1
Q4102		
E	1.1	1.1
C	4.8	4.8
B	1.8	1.8
Q4103		
E	1.2	1.2
C	2.2	2.2
B	1.8	1.8
IC4001		
1	3.2	3.2
2	0	0
3	0	0
4	0	0
5	3.2	3.2
6	3.1	3.2
7	0.6	3.2
8	0.6	3.2
9	0.7	0.8
10	3.2	3.2
11	0.6	0.8
12	0.4	1.2
13	0.4	1.2
14	0.4	1.5
15	0	0
16	0.4	1.4
17	0.6	1.6
18	0.7	1.5
19	1.8	1.8
20	0.6	0.5
21	0.6	1.6
22	0	1.5
23	0.4	1.5
24	0	1.8
25	0	1.5
26	0	0
27	1.8	1.8
28	0	0
29	0	0
30	1.6	1.8
31	2.6	2.6
32	1.6	1.6
33	0.7	0.8
34	1.8	1.8
35	1.2	1.2
36	0	0
37	3.1	3.2
38	0	0
39	0	0
40	1.6	1.6
41	1.2	1.7
42	1.2	1.6
43	3.2	3.2
44	1.2	1.6
45	1.1	1.5
46	1.3	1.5
47	0.7	1.3
48	0.6	1.5
49	0.6	1.2
50	0	0
51	1.1	1.5
52	0.8	1.3
53	1	1.5
54	1.5	1.5
55	1.5	1.5
56	1.6	1.6
57	0	0
58	0	0
59	3.2	3.2
60	0	0
61	3.2	3.2
62	1.5	0
63	0.9	0
64	0.8	1.8
65	0.9	1.8
66	0.6	1.7
67	0.7	1.7
68	0.8	1.7
69	0.5	1.7
70	1.3	1.7
71	1.7	1.7
72	0	0
73	1.8	1.7
74	1.8	1.7
75	1.1	1.7
76	1.5	1.5
77	1.6	1.6
78	2.9	2.9
79	1.8	1.8
80	2.4	2.4
81	1.1	1.7
82	1.4	1.7
83	1.7	1.8
84	0.8	1.8
85	0	0
86	1.8	1.8
87	0.5	2.2
88	0.6	2.2
89	2.1	2.2
90	1.2	1.5
91	0.8	1.6
92	0.7	1.5
93	0.8	1.6
94	1.5	1.5
95	1.5	1.6
96	0	0
97	3.2	3.2
98	1.5	1.5
99	3.2	3.2
100	3.2	3.2
101	3.2	3.2
102	0	0
103	3.2	3.2
104	3.2	3.2
105	3.2	3.2
106	3.2	3.2
107	0	0
108	3.2	3.2
109	3.2	0
110	3.2	3.2
111	3.2	3.1
112	1.3	3.1
113	1.2	3.1
114	0	1.9
115	1	2
116	1	3.2
117	0.7	2
118	0.7	0.6
119	0	2
120	0.7	2
121	0.8	0
122	1.3	2
123	1.8	1.5
124	0.8	1.5
125	0.9	1.8
126	1.6	1.5
127	1.5	1.5
128	0	1.5
129	0	0
130	0	0
131	1.8	1.8
132	0	0
133	3.1	0
134	2.7	2.7
135	2.7	2.7
136	0	0
137	0	0
138	1.8	1.8
139	0	0
140	0	0
141	0.5	0
142	0	0
143	0.5	0
144	0.8	1.7
145	2.5	1.6
146	0.8	0
147	3.2	3.2
148	0.8	1.6
149	0.9	1.7
150	1.3	1.6
151	1.2	1.6
152	1.5	1.6
153	1.4	0
154	0	0
155	2.9	0
156	3.1	0
157	0	0
158	3.2	3.2
159	2.5	2.5
160	1.1	1.1
161	1.1	1.1
162	0.4	0.5
163	0	0
164	1.1	1.1
165	1.1	1.1
166	0.4	0.4
167	0.5	0.4
168	0	0
169	2.5	2.5
170	0	0
171	0	0
172	1.2	1.1
173	1.1	1.1
174	0	0
175	0.5	0.4
176	0.4	0.4
177	2.5	2.5
178	1.2	0
179	1.1	1.1
180	1.2	1.2
181	0	0
182	2.5	0
183	1.8	1.8
184	3.2	0
185	3.2	3.2
186	0	0
187	0	0
188	3.2	3.2
189	0	0
190	1.8	1.8
191	3.2	0
192	3.2	3.2
193	1.5	0.7
194	3.1	3.1
195	3	3
196	1.5	1.5
197	0	0
198	0	0
199	0	0
200	0	0
201	3.2	3.2
202	0	0
203	0	0
204	0	0
205	0	0
206	0	0
207	0	0
208	0	0
IC4002		
1	0	0
2	0.9	0.8
3	0.6	0.7
4	0.8	0.8
5	1.0	0.9
6	1.3	0.7
7	1.2	1.0
8	1.4	1.5
9	0	0
10	0	0
11	0	0
12	0	0
13	2.7	2.7
14	3.1	3.2
15	0	1.5
16	1.3	0.8
17	3.1	3.1
18	1.0	1.4
19	0.8	0
20	0	0
21	0.6	1.2
22	0.9	0.9
23	3.1	3.1
24	0.8	1.3
25	0.6	0.6
26	0	0
27	1.5	1.6
28	0.8	1.3
29	3.2	3.2
30	0.9	2.0
31	1.3	1.3
32	3.1	3.1
33	0	0
34	2.7	2.6
35	0	0
36	0	0
37	0	0
38	1.5	1.5
39	1.5	1.5
40	0.9	1.7
41	0.8	1.6
42	1.2	1.4
43	0.6	0.6
44	0.8	0.7
IC4003		
1	2.9	2.9
2	2.3	2.3
3	2.5	2.6
4	3.2	3.2
5	3.2	0
6	0	0
7	0	0
8	0.8	1.5
9	0	0
10	0	0
11	0	0
12	0	0
13	0	0
14	0	0
15	0	0
16	0	0
17	0	0
18	0	0
19	3.1	3.1
20	2.9	2.9
IC4004		
1	3.2	3.2
2	0	0
3	1.3	1.3
4	2.5	2.5
5	3.2	3.2
IC4005		
1	0.8	0
2	0	0
3	1.3	1.3
4	0.7	2.9
5	3.2	3.2
IC5201		
1	0	0
2	1.2	1.7
3	1.3	1.7
4	0.8	1.7
5	0.7	1.7
6	0.7	1.7
7	2.3	1.7
8	0.6	1.7
9	0.7	1.7
10	0.7	1.6
11	0	1.8
12	0	0
13	0	0
14	0	0
15	3.2	3.2
16	1.6	1.5
17	3	0
18	2.8	0
19	2.7	0
20	2.6	0
21	0	0
22	0	0
23	3.2	3.2
24	0	0
25	0	0.6
26	2	0.4
27	1.5	1.6
28	2	0

MODE PIN NO.	REC	PLAY
29	2	0
30	0	0
31	3.1	0.5
32	2	2.1
33	1	1
34	1.5	1.5
35	1.2	1.2
36	0	0.6
37	0	0
38	3.2	3.1
39	0	0.5
40	0	0
41	3.2	3.2
42	0	0
43	3.2	3.2
44	3.1	3.1
45	0.6	0.8
46	3.2	3.2
47	0	0
48	0	0
IC5202		
1	3.2	3.2
2	3.2	3.2
3	1.5	1.6
4	3.1	0
5	3.1	0
6	2.6	0
7	0	0
8	1.7	1.7
9	3.2	3.2
10	1.7	1.6
11	1.6	1.5
12	1.6	1.6
13	3.2	3.2
14	0	0
15	2.8	0
16	2.7	0
17	2.8	0
18	0.4	0
19	3.2	3.2
20	0	3.2
21	1.7	0
22	1.5	0
23	0	0
24	0	0
25	0	2.2
26	0	1.4
27	0	0
28	0	0
29	-7.6	0
30	0	15.1
31	15.1	15.1
32	-7.6	15.1
33	-8.1	-8.2
34	-8.1	-8.2
35	0	0
36	0	1.5
37	0	0.5
38	0	0.5
39	3.1	3.1
40	0.9	0.7
41	0	0
42	0	3.2
43	0	0
44	3.2	3.2
45	0	0
46	3.2	0
47	2.9	0
48	3.1	0
Q4001		
1	0	0
2	0.4	0.5
3	1	1
4	0	0
5	0.4	0.4
6	1	1.1
Q4002		
1	0	0
2	0	0

MODE PIN NO.	REC	PLAY
3	0.8	0.8
4	0	0
5	0	0
6	0.8	0.8
Q4004		
E	1.1	1.2
C	0	0
B	0.5	0.6

<IRIS & AF/ZOOM>

MODE PIN NO.	REC	PLAY
IC4201		
1	1.5	0
2	1.6	0
3	1.5	1.5
4	0	0
5	1.9	1.9
6	1.9	1.9
7	1.9	1.9
8	4.8	4.8
IC4202		
1	0	0
2	0	3.2
3	1.6	0
4	4.8	4.8
5	1.9	1.6
6	1.9	2
7	1.6	3.5
8	2.5	0
9	1.9	1.9
10	2.5	0
11	0	0
12	0	0
13	0	0
14	0.9	1.6
IC4251		
1	2	2
2	2	2
3	2	2
4	0	0
5	2	2
6	2	2
7	1.7	1.7
8	4.8	4.8
IC4501		
1	0	0
2	0.8	0.8
3	0	0
4	0	0
5	0	0
6	0	0
7	0	0
8	3.2	3.2
9	4.8	4.8
10	1.7	2.2
11	0	0
12	1.6	2.2
13	4.8	4.8
14	1.3	0.8
15	0	0
16	2.2	3.6
17	0	0
18	0	0
19	0	0
20	0	0
21	0	0
22	0	0
23	4.8	4.8
24	1.6	2.3
25	0	0
26	1.6	2.3
27	4.8	4.8
28	1.6	2.3
29	0	0
30	1.5	2.3
31	0	0

MODE PIN NO.	REC	PLAY
32	0	0
33	0	0
34	0	0.7
35	3.1	3.2
36	1.6	1.6
37	1.5	1.5
38	3.2	3.2
Q4201		
E	0	0
C	1.4	0
B	1	1
Q4251		
E	0	0
C	4.8	4.8
B	–	–
Q4501		
E	0	0
C	4.8	1.1
B	0	0

<REG>

MODE PIN NO.	REC	PLAY
IC6001		
1	2	2.2
2	1.2	1.2
3	2.2	2.2
4	0	0
5	6.7	6.8
6	1	1
7	2.5	1.2
8	2.2	2.2
9	0	0
10	0	0
11	1	1
12	1	1
13	1	1
14	0.7	0.7
15	0	0
16	0	0
17	0.7	0.7
18	1	1
19	1.1	1
20	1	1
21	1	0.9
22	0.9	1
23	1	1
24	1	1
25	1	0.9
26	0.9	0.9
27	0	0
28	0.9	1
29	0	0
30	2.4	2.4
31	0.7	0.8
32	0.7	0.7
33	6.7	6.7
34	6.8	6.8
35	3.2	3.2
36	3.2	3.2
37	0	0
38	2.7	2.7
39	3.4	3.5
40	3	3
41	0	0
42	1.8	1.8
43	1.3	1.4
44	4.6	4.6
45	4.6	4.6
46	2.8	2.8
47	0	0
48	2.2	2.2
Q6111		
G	3.4	3.5
D	3.2	3.2
S	6.8	6.8

MODE PIN NO.	REC	PLAY
Q6121		
G	1.8	1.8
D	4.9	4.9
S	6.8	6.8
Q6123		
E	4.7	4.8
C	4.7	4.7
B	4.1	4.1
Q6124		
E	0	0
C	0	0
B	0.7	0.7
Q6131		
G	2.8	2.8
D	3.9	3.9
S	6.8	6.8
Q6141		
G	4.6	4.7
D	2	2
S	6.7	6.8
Q6151		
G	4.6	4.6
D	2	2
S	6.7	6.7
Q6161		
G	2.8	2.8
G	0	0
S	0	0
Q6162		
1	4.3	4.3
2	5	5.2
3	15.2	15.2
4	4.3	4.3
5	4.8	4.8
6	15.8	15.8
Q6163		
E	15.8	18.5
C	12.2	12.3
B	15.2	15.2
Q6164		
E	15.1	15.1
C	15.8	15.8
B	15.8	15.8
Q6165		
1	-7.5	-7.6
2	-8.1	-8.2
3	-14	-16.1
4	-7.6	-7.6
5	-8	-8.1
6	-16	-16.1
Q6166		
E	-14.6	-16.1
C	8.1	8.2
B	-14	-16
Q6167		
E	-15.1	-15.1
C	-15.8	-15.8
B	-15.8	-15.8
Q6168		
E	0	0
C	15.6	15.6
B	-0.9	-0.9
Q6201		
E	6.8	6.8
C	0	0
B	6.7	6.8
Q6202		
E	1.6	0.4
C	6.8	6.8
B	0	0
Q6203		
E	0	0
C	6.8	6.8
B	0	0

<CCD>

MODE PIN NO.	EE
IC5301	
1	-7.6
2	-7.6
3	0
4	0
5	0
6	9.5
7	14.9
8	0
9	0
10	10.3
11	-8.1
12	9.8
13	1.7
14	1.6
Q5301	
E	8.8
C	15
B	9.5

<MONITOR>

MODE PIN NO.	EE
IC7601	
1	1.6
2	1.6
3	1.6
4	0
5	0
6	0
7	0
8	0.7
9	3.6
10	0
11	2.4
12	2.4
13	2.4
14	2.4
15	2.4
16	2.4
17	0
18	7.2
19	0
20	0
21	0.4
22	1.5
23	1.6
24	1.6
25	3.2
26	1.4
27	1.4
28	0
29	0
30	0
31	0.5
32	0
33	2.8
34	0
35	0
36	0
37	3
38	3.1
39	0
40	0
41	0
42	3.2
43	3.2
44	3.2
45	0
46	3.2
47	0
48	1.8
IC7602	
1	3.1
2	3.1
3	3.2
4	0
5	2.1
6	3.1
7	3.1
8	3.2
IC7603	
1	5.9
2	5.9
3	5.9
4	0
5	3.1
6	3.2
7	0
8	12.1
Q7501	
E	0
C	4.6
B	0
Q7502	
E	0
C	4.6
B	0
Q7503	
E	4.7
C	4.6
B	0
Q7504	
E	0
C	0
B	0.6
Q7505	
E	0
C	0
B	0
Q7506	
E	0
C	0.6
B	0
Q7605	
E	3.2
C	3.1
B	0
Q7608	
E	–
C	–
B	–
Q7609	
E	–
C	–
B	–
Q7610	
E	-15.4
C	0
B	3.1

<E. VF>

MODE PIN NO.	EE
IC1	
1	2.1
2	4.8
3	2.2
4	2.2
5	0
6	1.3
7	2.1
8	4.5
9	4.2
10	0
11	1.9
12	4.4
13	1.8
14	1.8
15	1.8
16	3
Q1	
E	2.4
C	-16
B	1.8
Q2	
E	0
C	4.4
B	0
Q3	
E	0
C	0
B	0.4

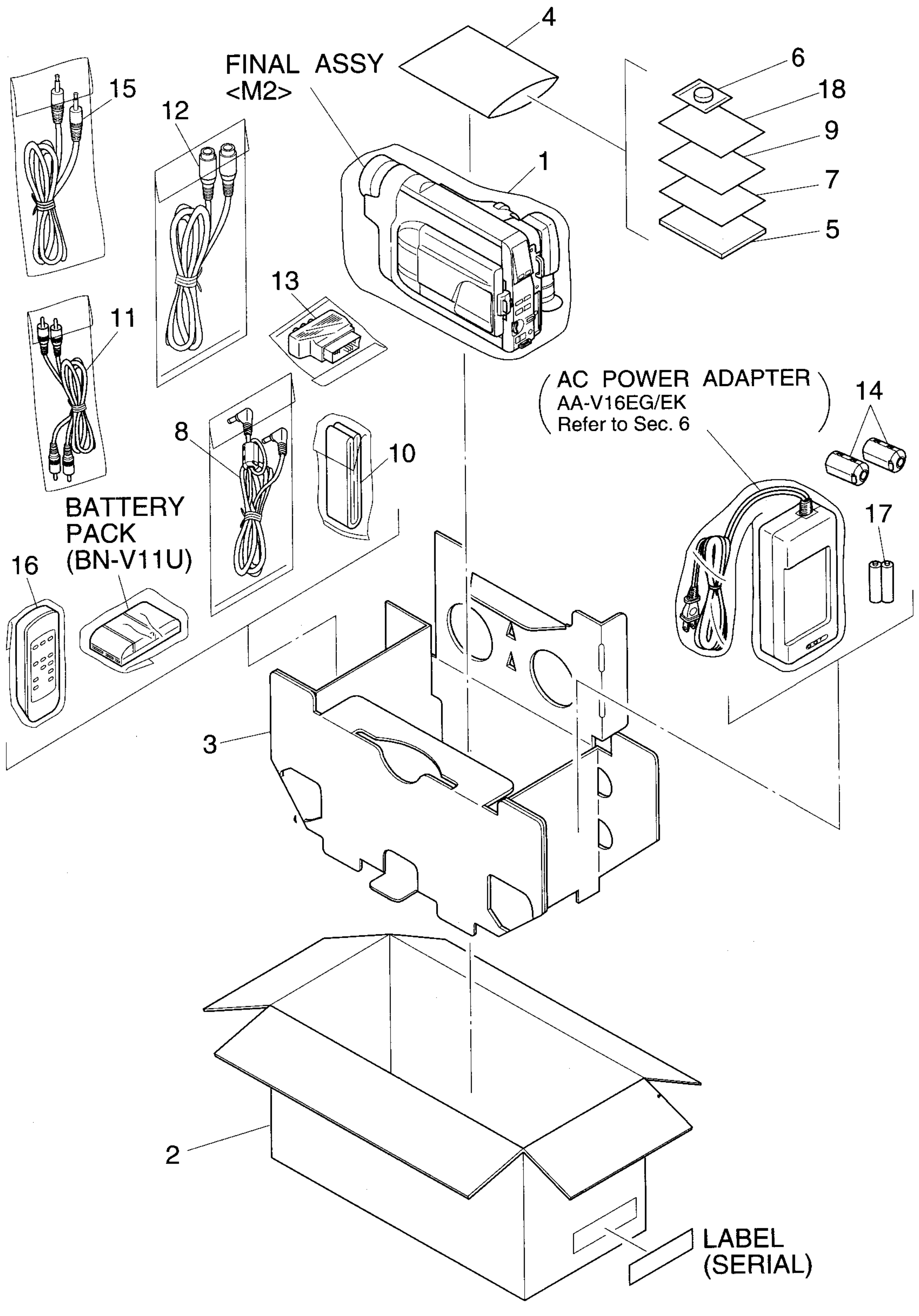
SECTION 5
PARTS LIST

SAFETY PRECAUTION

Parts identified by the ⚠ symbol are critical for safety. Replace only with specified part numbers.

5.1 PACKING ASSEMBLY <M1>

The instruction manual to be provided with this product will differ according to the destination.



# ⚠	REF No.	PART No.	PART NAME, DESCRIPTION

****

PACKING ASSEMBLY <M1>

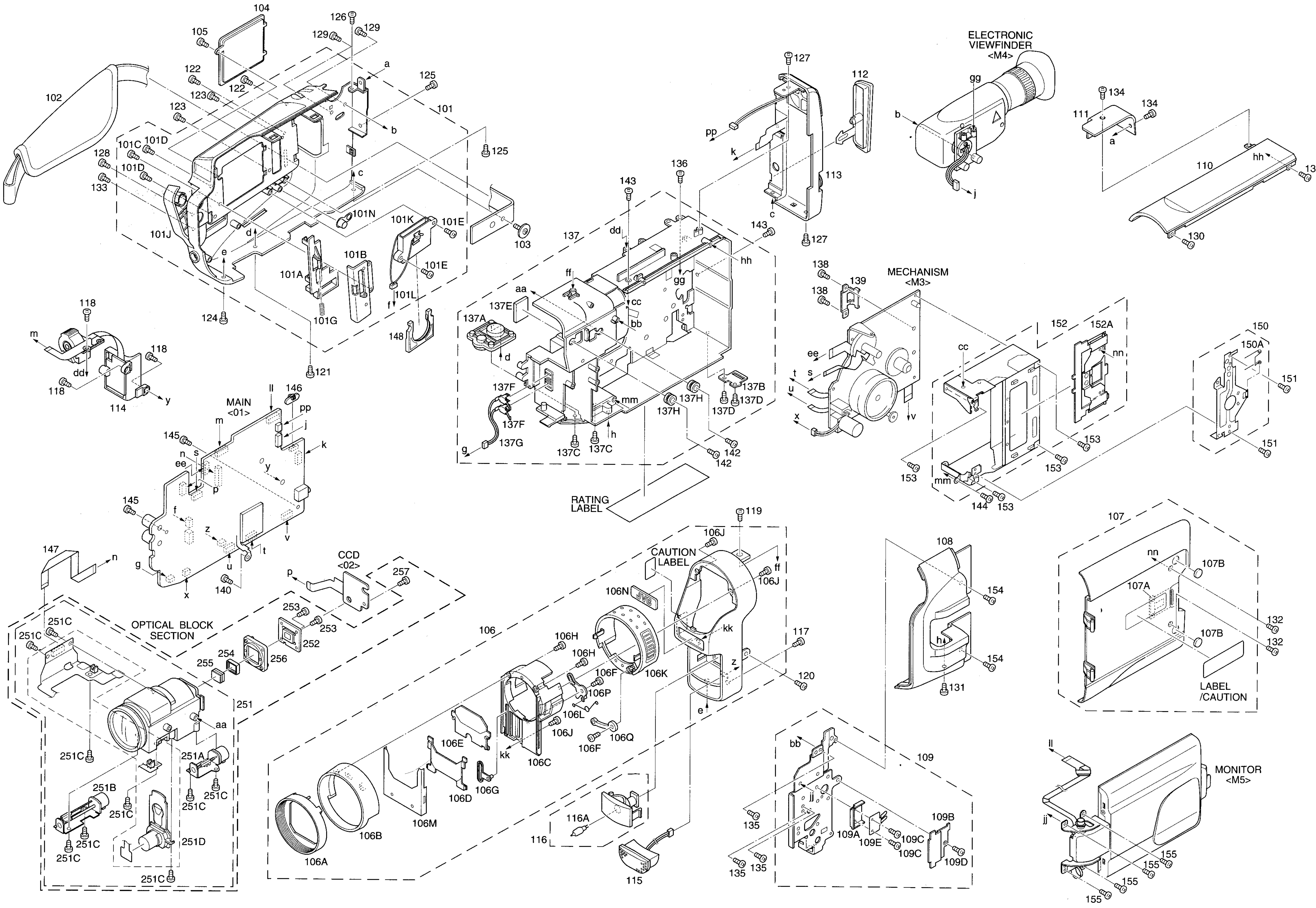
# ⚠	REF No.	PART No.	PART NAME, DESCRIPTION
	1	LY30023-002A	POLY BAG
	2	LY31143-011A	PACKING CASE,A
		LY31143-012A	PACKING CASE,C
		LY31561-015A	PACKING CASE,B
	3	LY31184-001A	CUSHION,A,C
		LY31563-001A	CUSHION,B
	4	YQM30061-3	POLY BAG,B
		QPA02003506	POLY BAG,A,C
⚠	5	LYT0485-001A	IB(EN)
⚠		LYT0486-002A	IB(GE),A,C
⚠		LYT0486-003A	IB(FR),A,C
⚠		LYT0486-004A	IB(DU),A,C
⚠		LYT0486-005A	IB(SP),A,C
⚠		LYT0486-006A	IB(IT),A,C
⚠		LYT0486-007A	IB(DA),A,C
⚠		LYT0486-008A	IB(FI),A,C
⚠		LYT0486-009A	IB(SW),A,C
⚠		LYT0486-010A	IB(NO),A,C
⚠		LYT0486-011A	IB(RU),A,C
⚠		LYT0486-012A	IB(CZ),A,C
⚠		LYT0486-013A	IB(PO),A,C
⚠		LYT0486-014A	IB(HU),A,C
⚠	6	PECA0903	LI BATTERY
	7	BT-54008-2	GUARANTY CARD,B
		BT-54013-1	WARRANTY CARD,A,C
	8	QAM0170-001	DC CORD
	9	PU36564	SHEET(MINITEL),A,C
	10	LY20186-001A	SHOULDER STRAP
	11	PEAC0362-150	CABLE ASSY(AUDIO/VIDEO)
	12	QAM0004-003	S CABLE,S-VIDEO CABLE
	13	PEMC1000-01-02	CONNECTOR,CABLE ADAPTER
	14	QQR0491-002	CORE FILTER,X2
	15	PEAC0428-150	CABLE ASSY(EDITING),C
	16	LY42129-001A	REMOTE CONTROLLER,C
	17	–	BATTERY,RCU,R03(AAA)X2,C
	18	LYT0486-015A	SHEET(C.FILTER),A,C

- **INSTRUCTIONS**

EN....... ENGLISH
GE ...... GERMANY
FR .... FRENCH
DU ...... DUTCH
SP .... SPANISH
IT .... ITALIAN
DA....... DANISH
FI .... FINNISH
SW ...... SWEDISH
NO ...... NORWEGIAN
RU ...... RUSSIAN
CZ....... CZECH
PO ...... POLISH
HU ...... HUNGARIAN

MODEL	MARK
GR-SXM26EG	A
GR-SXM26EK	B
GR-SXM46EG	C

5.2 FINAL ASSEMBLY <M2>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109E
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109D
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MONITOR
<M5>
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155

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FINAL ASSEMBLY <M2>

# ⚠	REF No.	PART No.	PART NAME, DESCRIPTION
⚠	101	LY10122-036A	LOWER CASE ASSY,A,B
⚠		LY10122-037A	LOWER CASE ASSY,C
	101A	LY30885-001C	KNOB(B.RELEASE)
	101B	LY30886-001B	BKT(B.RELEASE)
	101C	QYSLSP2030D	SCREW
	101D	QYSLSP2050D	SCREW,X2
	101E	QYSLSF2055D	SPECIAL SCREW,X2
	101G	LY30002-026A	COMPRES.SPRING
	101J	LY30891-001B	CAP(RCA JACK)
	101K	LY30888-001B	HOLDER(LITHIUM)
	101L	WJM0119-001A	E-SI C WIRE C-F
	101N	LY40081-001A	CAP
	102	LY20014-001A	GRIP BELT
	103	LY30018-003A	SPECIAL SCREW
⚠	104	LY30887-001B	CAP(JIG)
	105	QYSLSP2030D	SCREW
⚠	106	LY10124-043A	FRONT COVER ASSY,A,B
⚠		LY10124-045A	FRONT COVER ASSY,C
	106A	LY30893-001C	HOOD
	106B	LY31556-001A	COVER(HOOD)
	106C	LY20349-001C	GUIDE(SHUTTER)
	106D	LY30895-001B	SHUTTER(1)
	106E	LY30896-001A	SHUTTER(2)
	106F	YQ43762	SPECIAL SCREW,X2
	106G	LY41075-001A	SLIDER(SHUTTER)ASSY
	106H	QYSLSF2050Z	SCREW,X2
	106J	QYSLSF2060Z	SCREW,X3
	106K	LY20348-001A	DIAL(SHUTTER)
	106L	LY41081-001D	TORSION SPRING
	106M	LY41128-001B	HOLD(SHUTTER)
	106N	LY41381-001A	MARK
	106P	LY41077-001A	LEVER(1)
	106Q	LY41078-001A	LEVER(2)
	107	LY10131-020A	CASS.COVER(M)ASSY,A,B
		LY10131-021A	CASS.COVER(M)ASSY,C
	107A	LY30907-001A	BUTTON(PUSH)
	107B	LY40076-002A	SPACER,X2
	108	LY10133-002C	UPPER CASE(M),A,B
		LY10133-008A	UPPER CASE(M),C
	109	LY30908-001D	BKT(UPPER)ASSY
	109A	LY30909-001A	BKT(STOPPER)
	109B	LY30910-001C	COVER(STOPPER)
	109C	QYSLSP2030D	SCREW,X2
	109D	QYSLSP2025D	SCREW
	109E	LY41384-001A	EARTH PLATE(B)
	110	LY10129-081A	TOP COVER,A,B
		LY10129-084A	TOP COVER,C
	111	LY20328-001E	COVER(VF)
	112	LY30892-001B	CAP(REAR JACK)
	113	LY10120-037A	OPERATION UNIT,A,B
		LY10120-040A	OPERATION UNIT,C
	114	LY10121-001D	ZOOM UNIT
	115	LY30861-010A	MICROPHONE
	116	LY30860-001B	DC LIGHT ASSY
	116A	YQ44266	LAMP
	117	QYSLSF2055D	SPECIAL SCREW
	118	QYSLSF2055D	SPECIAL SCREW,X3
	119	YQ43762-5	SPECIAL SCREW
	120	QYSLSF2055D	SPECIAL SCREW
	121	QYSLSF2055D	SPECIAL SCREW
	122	QYSLSF2055D	SPECIAL SCREW,X2
	123	QYSLSF2055D	SPECIAL SCREW,X2
	124	QYSLSF2090D	SCREW
	125	QYSLSF2055D	SPECIAL SCREW,X2
	126	QYSLSF2055D	SPECIAL SCREW
	127	QYSLSF2055D	SPECIAL SCREW,X2
	128	QYSLSF2090D	SCREW
	129	QYSLSF2055D	SPECIAL SCREW,X2
	130	QYSLSF2055D	SPECIAL SCREW,X2
	131	QYSLSF2055D	SPECIAL SCREW
	132	QYSLSP2030D	SCREW,X2
	133	QYSLSF2090D	SCREW
	134	QYSLSF2055D	SPECIAL SCREW,X2
	135	QYSLSF2055D	SPECIAL SCREW,X3
	136	QYSLSF2055D	SPECIAL SCREW
⚠	137	LY20372-004A	FRAME ASSY
	137A	LY30903-001A	BASE
	137B	LY41090-001B	HOOK
	137C	QYSLSF2060D	SCREW,X2
	137D	QYSLSF2060Z	SCREW,X2
	137E	LY30016-0H2A	SPACER-A
	137F	YQ43810	CONTACT(LIGHT),X2
	137G	WJM0118-001A	E-SI C WIRE C-F
	137H	LY41082-001A	CUSHION(OP),X2
	138	YQ44457-3	SCREW,X2
	139	LY30904-001A	BKT(MECHA)
	140	QYSPSTU1725M	SCREW
	142	LY30018-050A	SPECIAL SCREW,X2
	143	LY41173-001A	SPECIAL SCREW,X2
	144	QYSLSF1750D	SCREW
	145	QYSLSF2055D	SPECIAL SCREW,X2
	146	LY41083-001B	KNOB(LIGHT)
	147	WJT0024-001A	E-CARD WIRE,OP-MAIN CN15
	148	LY30889-001B	CAP(LITHIUM)
	150	LY30514-001F	FRONT FRAME ASSY
	150A	YQ44144-1-1	TAPE GUIDE
	151	SPSH1725M	SCREW,X2
	152	YQ31752H-31	CASSETTE HOUSING ASSY
	152A	LY30175-001C	CASS.COVER INSIDE ASSY
	153	YQ44457-3	SCREW,X4
	154	QYSLSP2025D	SCREW,X2
	155	QYSLSP2030D	SCREW,X4

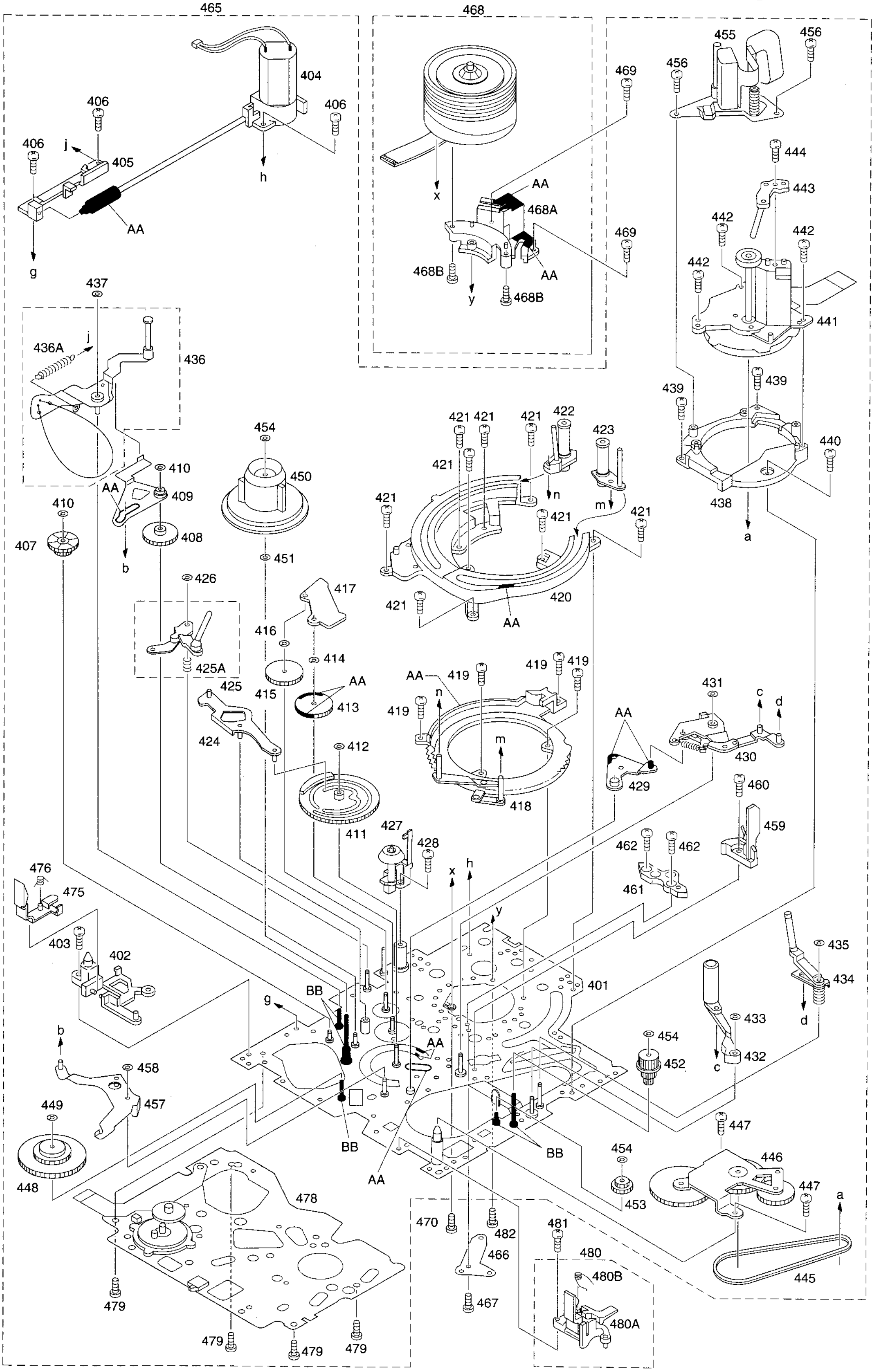
– OPTICAL BLOCK SECTION –

# ⚠	REF No.	PART No.	PART NAME, DESCRIPTION
	251	LY30948-003A	OP BLOCK ASSY
	251A	PTY30948-002	FOCUS MOTOR
	251B	PTY30948-301	ZOOM MOTOR
	251C	PTY30151-016	SCREW,X9
	251D	PTY30948-006	IRIS MOTOR UNIT,INCL.FPC
	252	LYH40018-004A	CCD BASE ASSY
	253	QYSPSGU2080Z	SCREW,X2
	254	LY31441-001A	SPACER RUBBER
	255	LY41370-001A	OP LPF
	256	LY20086-001A	CCD SPACER
	257	LY30018-072A	SPECIAL SCREW

5.3 MECHANISM ASSEMBLY <M3>

BEWARE OF BOGUS PARTS

Parts that do not meet specifications may cause trouble in regard to safety and performance. We recommend that genuine JVC parts be used.



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Classification	Part No.	Symbol in drawing
Grease	KYODO-SH-P	AA
Oil	YTU94027	BB

NOTE: The section marked in AA and BB indicate lubrication and greasing areas.

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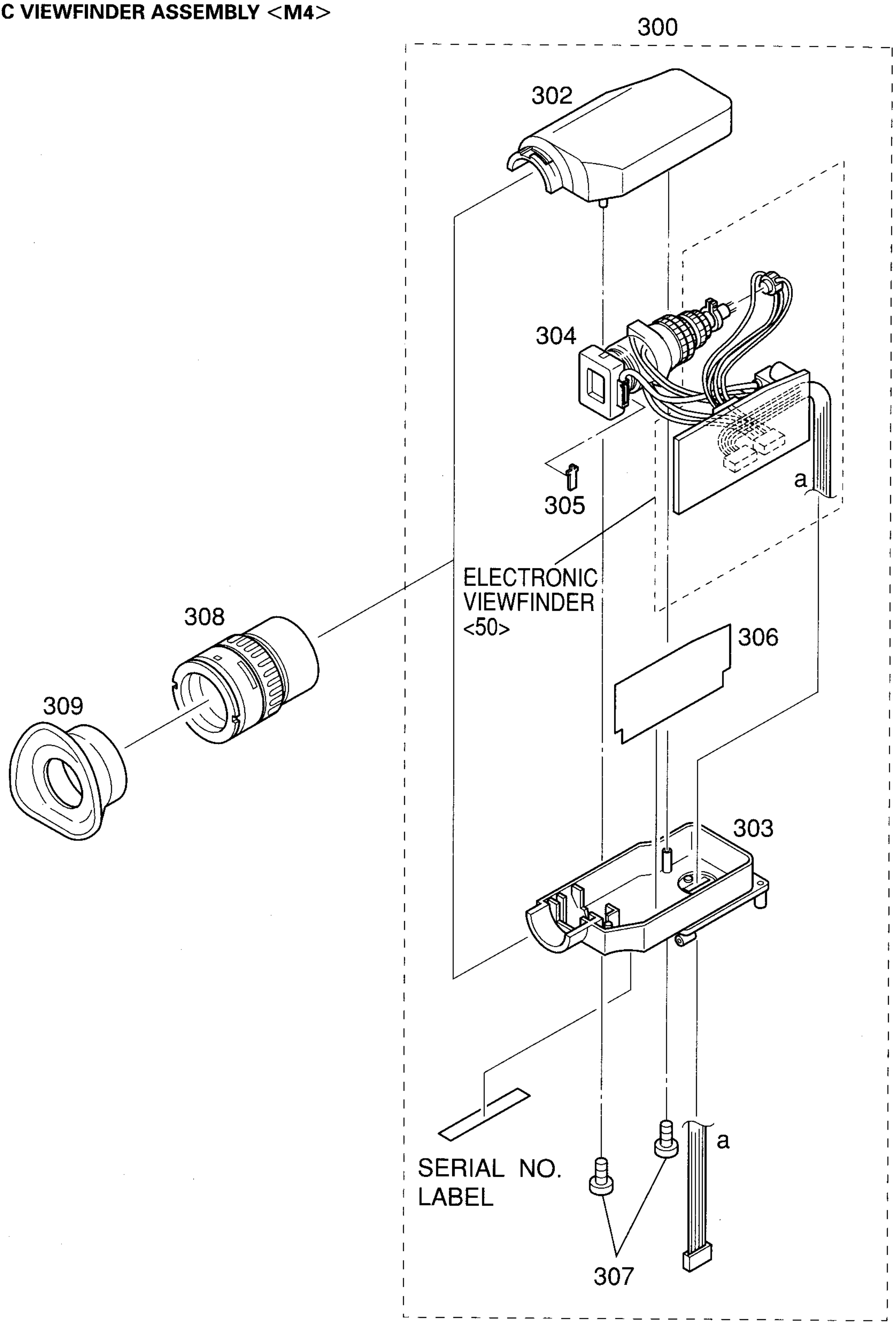
MECHANISM ASSEMBLY <M3>

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION
401	LY20182-001D	MAIN DECK ASSY
402	YQ32218	C.GUIDE(L)
403	YQ44457	SCREW
404	YQ31856A-3	MOTOR BRACKET ASSY
405	YQ20793	WORM BRACKET
406	YQ44457	SCREW,X3
407	YQ31783	WHEEL GEAR
408	YQ44328	MIDDLE GEAR
409	YQ43849B	CANCEL LEVER ASSY
410	PQM30017-27	SLIT WASHER,X2
411	YQ20827-2-1	CONTROL CAM
412	PQM30017-25	SLIT WASHER
413	YQ43853A	LOADING GEAR(T)ASSY
414	PQM30017-27	SLIT WASHER
415	YQ43852A	LOADING GEAR(S)ASSY
416	PQM30017-27	SLIT WASHER
417	YQ43634	COVER PLATE
418	YQ43635C-12	LOADING RING ASSY
419	YQ44457	SCREW,X4
420	YQ10516-1-11	GUIDE RAIL
421	YQ44457-5	SCREW,X8
422	YQ43646A-4	SUPPLY POLE BASE ASSY
423	YQ43654A-11	TAKE-UP POLE BASE ASSY
424	YQ44439A-2	DRIVE LEVER ASSY
425	YQ43663C-7	SLANT ARM ASSY
425A	YQ43670	TOR.SPRING(S)
426	PQM30017-27	SLIT WASHER
427	YQ44436A-3	ROLLER BASE ASSY
428	YQ44457	SCREW
429	YQ32230	LINK LEVER
430	YQ43682B-9	LINK ARM ASSY
431	PQM30017-25	SLIT WASHER
432	LY40018-001A	PINCH ROLLER ARM ASSY
433	PQM30017-25	SLIT WASHER
434	YQ44591A-3	TAKE-UP GUIDE ARM ASSY
435	PQM30017-27	SLIT WASHER
436	YQ44199C-9	TENSION ARM ASSY
436A	LY41515-001A	TENSION SPRING
437	PQM30017-27	SLIT WASHER
438	YQ20797-1-5	MOTOR BASE
439	YQ44457	SCREW,X2
440	YQ44460	SCREW
441	YU42078-2	CAPSTAN MOTOR
442	YQ44304	TAPPING SCREW,X3
443	YQ43708A-3	SLANT POLE BASE ASSY
444	YQ44304	TAPPING SCREW
445	YQ43710	TIMING BELT
446	YQ43711B-10	CENTER PULLEY UNIT
447	YQ44457-2	SCREW,X2
448	YQ43729A-3	SUPPLY CLUCH ASSY
449	PQM30017-27	SLIT WASHER
450	YQ31861-1-7	REEL DISC
451	Q03093-835	WASHER
452	YQ31787	TAKE-UP GEAR
453	YQ43737	BRAKE SUB GEAR
454	PQM30017-27	SLIT WASHER,X3
455	YQ43738D-22	A/C HEAD UNIT
456	SPSN1750Z	SCREW,X2
457	YQ43743B	EJECT LEVER ASSY
458	PQM30017-27	SLIT WASHER
459	YQ31833-1-1	LED GUIDE
460	YQ44457	SCREW
461	YQ43818	DRUM SPACER
462	YQ44457	SCREW,X2
465	YMA0028A	MECHA(A)ASSY
466	YU42051	BRUSH
467	YQ44457-3	SCREW
468	YDV2094A	DRUM ASSY
468A	YDM1003-1-5	CATCHER
468B	QYSPSPU1735M	SCREW,X2
469	YQ44457	SCREW,X2
470	SPSH1740Z	SCREW
475	YQ32219	SW.LEVER(L)
476	YQ44422-1-1	TORSION SPRING
478	QSW0751-001	ROTARY ENCODER
479	YQ44457-2	SCREW,X4
480	YQ44339A-7	C.GUIDE(R)ASSY
480A	YQ32162-1-3	SW.LEVER(R)
480B	YQ44340-1-4	TORSION SPRING
481	YQ44457	SCREW
482	SPSH1740Z	SCREW

5.4 ELECTRONIC VIEWFINDER ASSEMBLY <M4>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304
305
a
ELECTRONIC VIEWFINDER <50>
308
306
309
303
SERIAL NO. LABEL
a
307

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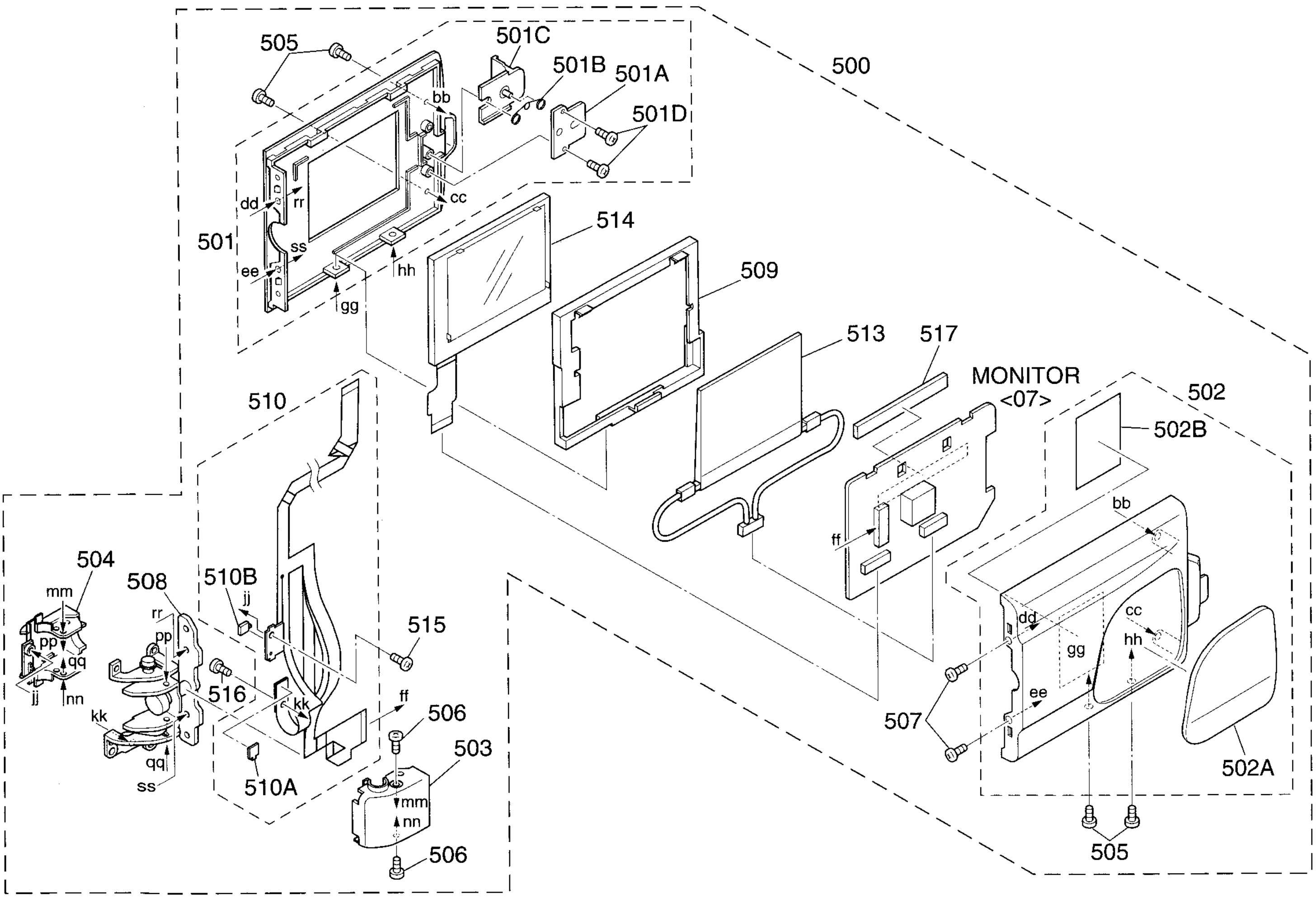
ELECTRONIC VIEWFINDER ASSEMBLY <M4>

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION
⚠ 300	LY20307-005A	E.VF ASSY
⚠ 302	PTY20307-002	TOP CASE
⚠ 303	PTY20307-012	BOTTOM CASE ASSY
⚠ 304	YQ31803-001	CRY/DY ASSY
⚠ 305	YU30181-014	HV COVER
⚠ 306	PTY20307-100	INSULATOR
307	YU30045-014	SCREW,X2 M1.7X5
308	PTY20307-200	LENS ASSY
309	PTY20307-201	EYE CAP

5.5 MONITOR ASSEMBLY <M5>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501C
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MONITOR
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MONITOR ASSEMBLY <M5>

# ⚠	REF No.	PART No.	PART NAME, DESCRIPTION
⚠	500	LYH20126-005A	MONITOR ASSY,A,B
⚠		LYH20126-006A	MONITOR ASSY,C
⚠	501	LY20331-001C	UPPERCASE(MONI)ASSY,A,B
⚠		LY20404-001C	UPPER CASE(MONI3)ASSY,C
	501A	LY41095-001B	BKT(LOCK)
	501B	LY41096-001B	T.SPRING
	501C	LY30913-001C	BUTTON(LOCK)
	501D	QYSLSF2035D	SCREW,X2
⚠	502	LY20482-005A	COVER(MONI)ASSY,A,B
⚠		LY20482-006A	COVER(MONI)ASSY,C
	502A	LY31295-005A	WINDOW,A,B
		LY31295-006A	WINDOW,C
	502B	LY40559-001A	SHIELD SHEET
	503	LY20333-004A	COVER(U.HINGE),A,B
		LY20333-007A	COVER(U.HINGE),C
	504	LY20334-001B	COVER(L.HINGE)
	505	LY30018-011A	SPECIAL SCREW,X4
	506	QYSLSP2030D	SCREW,X2
	507	LY30018-051A	SPECIAL SCREW,X2
	508	LY20310-001B	T.HINGE ASSY
	509	LY20335-001A	HOLDER(MONI)
	510	LY42087-001B	MONI.FPC ASSY
	510A	NSW0094-001X	DETECT SWITCH
	510B	NSW0007-001X	PUSH SWITCH
	513	QLL0054-003	BACK LIGHT,A,B
		QLL0074-001	BACK LIGHT,C
	514	QLD0082-001	LCD MODULE,A,B
		QLD0118-001	LCD MODULE,C
	515	QYSLSF2030D	SCREW
	516	QYSLSP2030D	SCREW
	517	LY30016-0H1A	SPACER-A

MODEL	MARK
GR-SXM26EG	A
GR-SXM26EK	B
GR-SXM46EG	C

5.6 ELECTRICAL PARTS LIST

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MAIN BOARD ASSEMBLY <01>

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION
PW	YB10271EB-04	MAIN BOARD ASSY,A,B
	YB10271EC-04	MAIN BOARD ASSY,C
IC101	UPD703039-013	IC(MICRO C ROM)
	or UPD70F3040-013	IC(MICRO C ROM)
IC102	S-81332HG-KC-X	IC
IC104	AT25080N-10SC-X	IC
IC105	M62367GP	IC
IC106	IC-PST9327U-X	IC
IC107	RS5C314	IC
IC1201	BA8400FV	IC
⚠ IC1601	BA6866KV	IC
IC1801	PIC-26043S	IR DETECT UNIT
IC2001	TC74AC04FT	IC(DIGITAL)
IC2401	NJM2073M-XE	IC
IC3001	JCY0130	IC
IC3002	74HC1G04GW	IC
IC3004	TC74VHC74FT	IC
IC3101	HA118219F	IC
IC3501	M52385FP	IC
IC3901	TC7WHU04FU	IC
IC4001	JCY0100	IC
IC4002	MSM548331TA	IC(DIGITAL),C
IC4003	UPD6462GS-914-X	IC
IC4004	MM1385NN	IC
IC4005	TC7S04FU	IC
IC4201	UPC358G2/5/-W	IC
IC4202	BA10324AFV-XE	IC
IC4251	BA10358F-XE	IC
IC4501	UPD16835G3	IC
IC5201	HD49326AF	IC
IC5202	JCY0098	IC
IC6001	FA3676F	IC
Q101	2SA1774/RS/-X	TRANSISTOR
Q102	DTC144EE	TRANSISTOR
Q103	2SC4617/QR/-X	TRANSISTOR
Q104	DTC144EE	TRANSISTOR
Q105	2SA1774/RS/-X	TRANSISTOR
Q106	DTC144EE	TRANSISTOR
Q107	DTA144EE	TRANSISTOR
Q110	DTC144EE	TRANSISTOR
Q2001	DTA114TE	TRANSISTOR
Q2006	DTC144EE	TRANSISTOR
Q2007	PUMX1	PAIR TRANSISTOR
Q2008	PUMT1	PAIR TRANSISTOR
Q2061	2SC4617/QR/-X	TRANSISTOR,C
Q2071	2SC4617/QR/-X	TRANSISTOR
Q2072	PUMX1	PAIR TRANSISTOR
Q3002	HN1C01FU/G/-X	PAIR TRANSISTOR
	or PUMX1	PAIR TRANSISTOR
Q3003	2SA1577/QR/-X	TRANSISTOR
Q3004	DTC144EE	TRANSISTOR
Q3005	DTA144EE	TRANSISTOR
Q3101	HN1C01FU/G/-X	PAIR TRANSISTOR
	or PUMX1	PAIR TRANSISTOR
Q3102	HN1A01FU/G/-X	PAIR TRANSISTOR
	or PUMT1	PAIR TRANSISTOR
Q3103	HN1C01FU/G/-X	PAIR TRANSISTOR
	or PUMX1	PAIR TRANSISTOR

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION
Q3104	HN1A01FU/G/-X	PAIR TRANSISTOR
	or PUMT1	PAIR TRANSISTOR
Q3105	HN1C01FU/G/-X	PAIR TRANSISTOR
	or PUMX1	PAIR TRANSISTOR
Q3106	HN1A01FU/G/-X	PAIR TRANSISTOR
	or PUMT1	PAIR TRANSISTOR
Q3501	HN1C01FU/G/-X	PAIR TRANSISTOR
Q3502	HN1C01FU/G/-X	PAIR TRANSISTOR
Q3506	DTC144EE	TRANSISTOR
Q3901	DTA114EE	TRANSISTOR
Q3902	DTC144EE	TRANSISTOR
Q3903	2SC4617/QR/-X	TRANSISTOR
Q3904	DTC144EE	TRANSISTOR
Q4001	PUMT1	PAIR TRANSISTOR
Q4002	PUMT1	PAIR TRANSISTOR
Q4004	2PA1774/R/-X	TRANSISTOR
Q4101	2SA1774/QR/-X	TRANSISTOR
Q4102	2SC4617/QR/-X	TRANSISTOR
Q4103	2SC4617/QR/-X	TRANSISTOR
Q4201	2SC4617/QRS/-X	TRANSISTOR
	or 2SC4738/YG/-X	TRANSISTOR
Q4251	RPM-22PB	PHOTO TRANSISTOR
Q4501	DTC114EE	TRANSISTOR
Q6111	NDS352AP	MOS FET
Q6121	NDS352AP	MOS FET
Q6123	2SB1121/ST/-X	TRANSISTOR
Q6124	2SC4617/QR/-X	TRANSISTOR
	or 2SC4738/YG/-X	TRANSISTOR
Q6131	NDS352AP	MOS FET
Q6141	NDS352AP	MOS FET
Q6151	NDS352AP	MOS FET
Q6161	NDS352AP	MOS FET
Q6162	HN1C01FU/G/-X	PAIR TRANSISTOR
Q6163	2SA1577/QR/-X	TRANSISTOR
Q6164	2SC4617/QR/-X	TRANSISTOR
	or 2SC4738/YG/-X	TRANSISTOR
Q6165	HN1A01FU/G/-X	PAIR TRANSISTOR
Q6166	2SC4617/QR/-X	TRANSISTOR
	or 2SC4738/YG/-X	TRANSISTOR
Q6167	2SA1774/QR/-X	TRANSISTOR
	or 2SA1832/YG/-X	TRANSISTOR
Q6168	DTC144EE	TRANSISTOR
	or RN1104	TRANSISTOR
Q6201	2SA1774/QR/-X	TRANSISTOR
	or 2SA1832/YG/-X	TRANSISTOR
Q6202	2SD1628/FG/-X	TRANSISTOR
Q6203	2SC4617/QR/-X	TRANSISTOR
	or 2SC4738/YG/-X	TRANSISTOR
⚠ D101	SB007W03Q	SB DIODE
D102	UDZS7.5B	ZENER DIODE
D105	1SS355	DIODE
D106	1SS355	DIODE
D107	SB007W03Q	SB DIODE
D501	MA8068	ZENER DIODE
D502	MA8068	ZENER DIODE
D3001	DAN222	DIODE
D3002	DAN222	DIODE
D3101	MA8068	ZENER DIODE
D3102	MA8068	ZENER DIODE
D3103	MA8068	ZENER DIODE
D5201	1SS355	DIODE
D6111	CRS06	SB DIODE

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
D6121	CRS06	SB DIODE	
D6131	CRS06	SB DIODE	
D6141	CRS06	SB DIODE	
D6151	CRS06	SB DIODE	
D6152	CRS06	SB DIODE	
D6161	1SS357	SB DIODE	
D6162	1SS357	SB DIODE	
D6163	1SS357	SB DIODE	
D6164	1SS357	SB DIODE	
D6165	MA8091/L/-X	ZENER DIODE	
R101	NRSA63J-104X	MG RESISTOR	100kΩ,1/16W
⚠ R104	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R105	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R106	NRSA63J-561X	MG RESISTOR	560Ω,1/16W
R107	NRVA63D-153X	CMF RESISTOR	15kΩ,1/16W
R108	NRVA63D-243X	CMF RESISTOR	24kΩ,1/16W
R109	NRVA63D-183X	CMF RESISTOR	18kΩ,1/16W
R110	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R111	NRSA63J-273X	MG RESISTOR	27kΩ,1/16W
R112	NRSA63J-331X	MG RESISTOR	330Ω,1/16W
R113	NRSA63J-562X	MG RESISTOR	5.6kΩ,1/16W
R114	NRSA63J-821X	MG RESISTOR	820Ω,1/16W
R115	NRSA63J-101X	MG RESISTOR	100Ω,1/16W
R116	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R118	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R119	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R120	NRSA63J-273X	MG RESISTOR	27kΩ,1/16W
R121	NRSA63J-273X	MG RESISTOR	27kΩ,1/16W
R122	NRSA63J-393X	MG RESISTOR	39kΩ,1/16W
R123	NRSA63J-104X	MG RESISTOR	100kΩ,1/16W
R124	NRSA63J-104X	MG RESISTOR	100kΩ,1/16W
R125	NRSA63J-273X	MG RESISTOR	27kΩ,1/16W
R126	NRSA63J-153X	MG RESISTOR	15kΩ,1/16W
R127	NRSA63J-221X	MG RESISTOR	220Ω,1/16W
R128	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R129	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R130	NRSA63J-105X	MG RESISTOR	1MΩ,1/16W
R131	NRSA63J-105X	MG RESISTOR	1MΩ,1/16W
R132	NRSA63J-105X	MG RESISTOR	1MΩ,1/16W
R133	NRSA63J-105X	MG RESISTOR	1MΩ,1/16W
R134	NRSA63J-105X	MG RESISTOR	1MΩ,1/16W
R135	NRSA63J-104X	MG RESISTOR	100kΩ,1/16W
R136	NRSA63J-474X	MG RESISTOR	470kΩ,1/16W
R137	NRSA63J-273X	MG RESISTOR	27kΩ,1/16W
R138	NRSA63J-333X	MG RESISTOR	33kΩ,1/16W
R139	NRSA63J-104X	MG RESISTOR	100kΩ,1/16W
R140	NRSA63J-124X	MG RESISTOR	120kΩ,1/16W
R141	NRSA63J-105X	MG RESISTOR	1MΩ,1/16W
R142	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R143	NRSA63J-105X	MG RESISTOR	1MΩ,1/16W
R144	NRSA63J-221X	MG RESISTOR	220Ω,1/16W
R145	NRSA63J-222X	MG RESISTOR	2.2kΩ,1/16W
R146	NRSA63J-474X	MG RESISTOR	470kΩ,1/16W
R147	NRSA63J-472X	MG RESISTOR	4.7kΩ,1/16W
R148	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
R150	NRSA63J-331X	MG RESISTOR	330Ω,1/16W
R152	NRSA63J-474X	MG RESISTOR	470kΩ,1/16W
R153	NRSA63J-474X	MG RESISTOR	470kΩ,1/16W
R154	NRSA63J-474X	MG RESISTOR	470kΩ,1/16W
R155	NRSA63J-474X	MG RESISTOR	470kΩ,1/16W
R156	NRSA63J-474X	MG RESISTOR	470kΩ,1/16W
R157	NRSA63J-474X	MG RESISTOR	470kΩ,1/16W

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
R158	NRSA63J-474X	MG RESISTOR	470kΩ,1/16W
R159	NRSA63J-474X	MG RESISTOR	470kΩ,1/16W
R160	NRSA63J-474X	MG RESISTOR	470kΩ,1/16W
R161	NRSA63J-104X	MG RESISTOR	100kΩ,1/16W
R162	NRSA63J-472X	MG RESISTOR	4.7kΩ,1/16W
R164	NRSA63J-472X	MG RESISTOR	4.7kΩ,1/16W
R166	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R167	NRSA63J-183X	MG RESISTOR	18kΩ,1/16W
R168	NRSA63J-562X	MG RESISTOR	5.6kΩ,1/16W
R170	NRSA63J-333X	MG RESISTOR	33kΩ,1/16W
R171	NRSA63J-104X	MG RESISTOR	100kΩ,1/16W
R501	NRSA63J-105X	MG RESISTOR	1MΩ,1/16W
R504	NRSA63J-221X	MG RESISTOR	220Ω,1/16W
R505	NRSA63J-331X	MG RESISTOR	330Ω,1/16W
R1201	NRSA63J-824X	MG RESISTOR	820kΩ,1/16W
R1202	NRSA63J-821X	MG RESISTOR	820Ω,1/16W
R1203	NRSA63J-472X	MG RESISTOR	4.7kΩ,1/16W
R1204	NRSA63J-274X	MG RESISTOR	270kΩ,1/16W
R1601	NRV142F-R33X	CMF RESISTOR	0.33Ω,1/4W
R1602	NRV142F-R33X	CMF RESISTOR	0.33Ω,1/4W
R1603	NRSA63J-154X	MG RESISTOR	150kΩ,1/16W
R1604	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R1605	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R1606	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R1607	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R1608	NRSA63J-474X	MG RESISTOR	470kΩ,1/16W
R1609	NRSA63J-184X	MG RESISTOR	180kΩ,1/16W
R1610	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R1612	NRVA63D-332X	CMF RESISTOR	3.3kΩ,1/16W
R1613	NRSA63J-333X	MG RESISTOR	33kΩ,1/16W
R1614	NRSA63J-123X	MG RESISTOR	12kΩ,1/16W
R1615	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R1617	NRVA63D-392X	CMF RESISTOR	3.9kΩ,1/16W
R1618	NRSA63J-154X	MG RESISTOR	150kΩ,1/16W
R1619	NRSA63J-471X	MG RESISTOR	470Ω,1/16W
R1620	NRSA63J-684X	MG RESISTOR	680kΩ,1/16W
R1621	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R1622	NRSA63J-224X	MG RESISTOR	220kΩ,1/16W
R1623	NRSA63J-223X	MG RESISTOR	22kΩ,1/16W
R1628	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
R1629	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
R1630	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
R1631	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R1632	NRSA63J-153X	MG RESISTOR	15kΩ,1/16W
R1633	NRSA63J-683X	MG RESISTOR	68kΩ,1/16W
R2001	NRSA63J-104X	MG RESISTOR	100kΩ,1/16W
R2002	NRSA63J-332X	MG RESISTOR	3.3kΩ,1/16W
R2003	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R2004	NRSA63J-681X	MG RESISTOR	680Ω,1/16W
R2005	NRSA63J-272X	MG RESISTOR	2.7kΩ,1/16W
R2006	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R2011	NRSA63J-101X	MG RESISTOR	100Ω,1/16W
R2012	NRSA63J-101X	MG RESISTOR	100Ω,1/16W
R2016	NRVA63D-183X	CMF RESISTOR	18kΩ,1/16W
R2021	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R2022	NRSA63J-334X	MG RESISTOR	330kΩ,1/16W
R2023	NRSA63J-820X	MG RESISTOR	82Ω,1/16W
R2024	NRSA63J-823X	MG RESISTOR	82kΩ,1/16W
R2025	NRSA63J-153X	MG RESISTOR	15kΩ,1/16W
R2026	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R2027	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R2029	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
R2061	NRSA63J-103X	MG RESISTOR,C	10kΩ,1/16W
R2062	NRSA63J-334X	MG RESISTOR,C	330kΩ,1/16W
R2063	NRSA63J-104X	MG RESISTOR,C	100kΩ,1/16W
R2071	NRSA63J-473X	MG RESISTOR	47kΩ,1/16W
R2072	NRSA63J-682X	MG RESISTOR	6.8kΩ,1/16W
R2073	NRSA63J-682X	MG RESISTOR	6.8kΩ,1/16W
R2074	NRSA63J-473X	MG RESISTOR	47kΩ,1/16W
R2075	NRSA63J-473X	MG RESISTOR	47kΩ,1/16W
R2076	NRSA63J-473X	MG RESISTOR	47kΩ,1/16W
R2401	NRSA63J-683X	MG RESISTOR	68kΩ,1/16W
R2402	NRSA63J-122X	MG RESISTOR	1.2kΩ,1/16W
R2403	NRSA63J-2R2X	MG RESISTOR	2.2Ω,1/16W
R2404	NRSA63J-2R2X	MG RESISTOR	2.2Ω,1/16W
R3001	NRSA63J-105X	MG RESISTOR	1MΩ,1/16W
R3002	NRSA63J-471X	MG RESISTOR	470Ω,1/16W
R3004	NRSA63J-223X	MG RESISTOR	22kΩ,1/16W
R3006	NRSA63J-681X	MG RESISTOR	680Ω,1/16W
R3007	NRSA63J-123X	MG RESISTOR	12kΩ,1/16W
R3008	NRSA63J-393X	MG RESISTOR	39kΩ,1/16W
R3009	NRSA63J-272X	MG RESISTOR	2.7kΩ,1/16W
R3010	NRSA63J-332X	MG RESISTOR	3.3kΩ,1/16W
R3014	NRSA63J-681X	MG RESISTOR	680Ω,1/16W
R3015	NRSA63J-332X	MG RESISTOR	3.3kΩ,1/16W
R3016	NRSA63J-332X	MG RESISTOR	3.3kΩ,1/16W
R3018	NRSA63J-271X	MG RESISTOR	270Ω,1/16W
R3023	NRSA63J-561X	MG RESISTOR	560Ω,1/16W
R3024	NRSA63J-104X	MG RESISTOR	100kΩ,1/16W
R3026	NRSA63J-104X	MG RESISTOR	100kΩ,1/16W
R3027	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R3028	NRVA63D-472X	CMF RESISTOR	4.7kΩ,1/16W
R3029	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
R3030	NRSA63J-561X	MG RESISTOR	560Ω,1/16W
R3033	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R3034	NRSA63J-220X	MG RESISTOR	22Ω,1/16W
R3035	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R3101	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3102	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3103	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3108	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
R3109	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3110	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3111	NRSA02J-560X	MG RESISTOR	56Ω,1/10W
R3112	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3113	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3114	NRSA02J-560X	MG RESISTOR	56Ω,1/10W
R3115	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3116	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3117	NRSA02J-560X	MG RESISTOR	56Ω,1/10W
R3131	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
R3132	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
R3134	NRSA63J-221X	MG RESISTOR	220Ω,1/16W
R3135	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
R3501	NRSA63J-681X	MG RESISTOR	680Ω,1/16W
R3503	NRSA63J-471X	MG RESISTOR	470Ω,1/16W
R3504	NRSA63J-681X	MG RESISTOR	680Ω,1/16W
R3506	NRSA63J-681X	MG RESISTOR	680Ω,1/16W
R3508	NRSA63J-471X	MG RESISTOR	470Ω,1/16W
R3509	NRSA63J-681X	MG RESISTOR	680Ω,1/16W
R3515	NRSA63J-243X	MG RESISTOR	24kΩ,1/16W
R3519	NRSA63J-681X	MG RESISTOR	680Ω,1/16W
R3536	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3537	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
R3901	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R3902	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R4001	NRSA63J-113X	MG RESISTOR	11kΩ,1/16W
R4002	NRSA63J-123X	MG RESISTOR	12kΩ,1/16W
R4003	NRSA63J-153X	MG RESISTOR	15kΩ,1/16W
R4004	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R4006	NRVA63D-272X	CMF RESISTOR	2.7kΩ,1/16W
R4007	NRVA63D-272X	CMF RESISTOR	2.7kΩ,1/16W
R4008	NRVA63D-272X	CMF RESISTOR	2.7kΩ,1/16W
R4009	NRVA63D-152X	CMF RESISTOR	1.5kΩ,1/16W
R4010	NRVA63D-122X	CMF RESISTOR	1.2kΩ,1/16W
R4011	NRVA63D-152X	CMF RESISTOR	1.5kΩ,1/16W
R4012	NRVA63D-122X	CMF RESISTOR	1.2kΩ,1/16W
R4013	NRVA63D-152X	CMF RESISTOR	1.5kΩ,1/16W
R4014	NRVA63D-122X	CMF RESISTOR	1.2kΩ,1/16W
R4015	NRVA63D-181X	CMF RESISTOR	180Ω,1/16W
R4016	NRSA63J-152X	MG RESISTOR	1.5kΩ,1/16W
R4017	NRVA63D-181X	CMF RESISTOR	180Ω,1/16W
R4018	NRSA63J-152X	MG RESISTOR	1.5kΩ,1/16W
R4019	NRVA63D-620X	CMF RESISTOR	62Ω,1/16W
R4020	NRVA63D-101X	CMF RESISTOR	100Ω,1/16W
R4021	NRSA63J-152X	MG RESISTOR	1.5kΩ,1/16W
R4022	NRVA63D-750X	CMF RESISTOR	75Ω,1/16W
R4023	NRVA63D-750X	CMF RESISTOR	75Ω,1/16W
R4024	NRSA63J-152X	MG RESISTOR	1.5kΩ,1/16W
R4025	NRVA63D-221X	CMF RESISTOR	220Ω,1/16W
R4027	NRSA63J-152X	MG RESISTOR	1.5kΩ,1/16W
R4036	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
R4037	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R4101	NRSA63J-182X	MG RESISTOR	1.8kΩ,1/16W
R4102	NRSA63J-391X	MG RESISTOR	390Ω,1/16W
R4103	NRSA63J-822X	MG RESISTOR	8.2kΩ,1/16W
R4104	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R4105	NRSA63J-471X	MG RESISTOR	470Ω,1/16W
R4106	NRSA63J-153X	MG RESISTOR	15kΩ,1/16W
R4107	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R4108	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R4109	NRSA63J-222X	MG RESISTOR	2.2kΩ,1/16W
R4110	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R4111	NRSA63J-151X	MG RESISTOR	150Ω,1/16W
R4201	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R4202	NRSA63J-563X	MG RESISTOR	56kΩ,1/16W
R4203	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R4204	NRSA63J-331X	MG RESISTOR	330Ω,1/16W
R4205	NRSA63J-105X	MG RESISTOR	1MΩ,1/16W
R4206	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R4207	NRSA63J-104X	MG RESISTOR	100kΩ,1/16W
R4208	NRSA63J-472X	MG RESISTOR	4.7kΩ,1/16W
R4209	NRSA63J-104X	MG RESISTOR	100kΩ,1/16W
R4210	NRSA63J-105X	MG RESISTOR	1MΩ,1/16W
R4211	NRSA63J-243X	MG RESISTOR	24kΩ,1/16W
R4214	NRSA63J-472X	MG RESISTOR	4.7kΩ,1/16W
R4215	NRSA63J-683X	MG RESISTOR	68kΩ,1/16W
R4216	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R4217	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R4218	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R4219	NRSA63J-104X	MG RESISTOR	100kΩ,1/16W
R4220	NRSA63J-152X	MG RESISTOR	1.5kΩ,1/16W
R4221	NRSA63J-334X	MG RESISTOR	330kΩ,1/16W
R4222	NRSA63J-154X	MG RESISTOR	150kΩ,1/16W
R4223	NRSA63J-333X	MG RESISTOR	33kΩ,1/16W
R4224	NRSA63J-223X	MG RESISTOR	22kΩ,1/16W

# ⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	R4251	NRSA63J-182X	MG RESISTOR	1.8kΩ,1/16W
	R4252	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
	R4253	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
	R4254	NRSA63J-684X	MG RESISTOR	680kΩ,1/16W
	R4255	NRSA63J-222X	MG RESISTOR	2.2kΩ,1/16W
	R4256	NRSA63J-824X	MG RESISTOR	820kΩ,1/16W
	R4257	NRSA63J-822X	MG RESISTOR	8.2kΩ,1/16W
	R4258	NRSA63J-104X	MG RESISTOR	100kΩ,1/16W
	R4259	NRSA63J-683X	MG RESISTOR	68kΩ,1/16W
	R4262	NRSA63J-302X	MG RESISTOR	3kΩ,1/16W
⚠	R4501	NRSA63J-6R8X	MG RESISTOR	6.8Ω,1/16W
⚠	R4502	NRSA63J-6R8X	MG RESISTOR	6.8Ω,1/16W
⚠	R4503	NRSA63J-6R8X	MG RESISTOR	6.8Ω,1/16W
⚠	R4504	NRSA63J-6R8X	MG RESISTOR	6.8Ω,1/16W
	R4505	NRSA63J-271X	MG RESISTOR	270Ω,1/16W
	R4506	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
	R4507	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
	R4514	NRSA63J-223X	MG RESISTOR	22kΩ,1/16W
	R4515	NRSA63J-182X	MG RESISTOR	1.8kΩ,1/16W
	R4518	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
	R5201	NRSA63J-243X	MG RESISTOR	24kΩ,1/16W
	R5202	NRSA63J-220X	MG RESISTOR	22Ω,1/16W
	R5211	NRSA63J-562X	MG RESISTOR	5.6kΩ,1/16W
	R5212	NRSA63J-101X	MG RESISTOR	100Ω,1/16W
	R5213	NRSA63J-101X	MG RESISTOR	100Ω,1/16W
	R5214	NRSA63J-101X	MG RESISTOR	100Ω,1/16W
	R5215	NRSA63J-101X	MG RESISTOR	100Ω,1/16W
	R5216	NRSA63J-100X	MG RESISTOR	10Ω,1/16W
	R5217	NRSA63J-104X	MG RESISTOR	100kΩ,1/16W
	R5218	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
	R5220	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
	R6001	NRSA63J-104X	MG RESISTOR	100kΩ,1/16W
	R6002	NRSA63J-823X	MG RESISTOR	82kΩ,1/16W
	R6009	NRVA63D-153X	CMF RESISTOR	15kΩ,1/16W
	R6010	NRSA63J-223X	MG RESISTOR	22kΩ,1/16W
	R6011	NRSA63J-223X	MG RESISTOR	22kΩ,1/16W
	R6012	NRSA63J-472X	MG RESISTOR	4.7kΩ,1/16W
	R6111	NRSA63J-4R7X	MG RESISTOR	4.7Ω,1/16W
	R6112	NRVA63D-223X	CMF RESISTOR	22kΩ,1/16W
	R6113	NRVA63D-103X	CMF RESISTOR	10kΩ,1/16W
	R6121	NRSA63J-4R7X	MG RESISTOR	4.7Ω,1/16W
	R6122	NRVA63D-183X	CMF RESISTOR	18kΩ,1/16W
	R6123	NRVA63D-472X	CMF RESISTOR	4.7kΩ,1/16W
	R6125	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
	R6126	NRSA63J-152X	MG RESISTOR	1.5kΩ,1/16W
	R6127	NRSA63J-473X	MG RESISTOR	47kΩ,1/16W
	R6131	NRSA63J-473X	MG RESISTOR	47kΩ,1/16W
	R6133	NRSA63J-473X	MG RESISTOR	47kΩ,1/16W
	R6134	NRVA63D-302X	CMF RESISTOR	3kΩ,1/16W
	R6135	NRSA63J-823X	MG RESISTOR	82kΩ,1/16W
	R6136	NRSA63J-113X	MG RESISTOR	11kΩ,1/16W
	R6137	NRSA63J-682X	MG RESISTOR	6.8kΩ,1/16W
	R6141	NRSA63J-4R7X	MG RESISTOR	4.7Ω,1/16W
	R6142	NRSA63J-243X	MG RESISTOR	24kΩ,1/16W
	R6143	NRSA63J-332X	MG RESISTOR	3.3kΩ,1/16W
	R6144	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
	R6145	NRSA63J-223X	MG RESISTOR	22kΩ,1/16W
	R6146	NRSA63J-823X	MG RESISTOR	82kΩ,1/16W
	R6151	NRSA63J-4R7X	MG RESISTOR	4.7Ω,1/16W
	R6152	NRVA63D-103X	CMF RESISTOR	10kΩ,1/16W
	R6153	NRVA63D-103X	CMF RESISTOR	10kΩ,1/16W
	R6161	NRSA63J-4R7X	MG RESISTOR	4.7Ω,1/16W

# ⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	R6162	NRVA63D-683X	CMF RESISTOR	68kΩ,1/16W
	R6163	NRVA63D-392X	CMF RESISTOR	3.9kΩ,1/16W
	R6164	NRSA63J-394X	MG RESISTOR	390kΩ,1/16W
	R6165	NRSA63J-473X	MG RESISTOR	47kΩ,1/16W
	R6166	NRSA63J-273X	MG RESISTOR	27kΩ,1/16W
	R6167	NRSA63J-822X	MG RESISTOR	8.2kΩ,1/16W
	R6168	NRVA63D-513X	CMF RESISTOR	51kΩ,1/16W
	R6169	NRVA63D-823X	CMF RESISTOR	82kΩ,1/16W
	R6170	NRVA63D-473X	CMF RESISTOR	47kΩ,1/16W
	R6171	NRSA63J-222X	MG RESISTOR	2.2kΩ,1/16W
	R6172	NRVA63D-823X	CMF RESISTOR	82kΩ,1/16W
	R6173	NRSA63J-474X	MG RESISTOR	470kΩ,1/16W
	R6174	NRVA63D-683X	CMF RESISTOR	68kΩ,1/16W
	R6175	NRSA63J-333X	MG RESISTOR	33kΩ,1/16W
	R6176	NRSA63J-333X	MG RESISTOR	33kΩ,1/16W
	R6177	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
	R6178	NRSA63J-222X	MG RESISTOR	2.2kΩ,1/16W
	R6179	NRSA63J-272X	MG RESISTOR	2.7kΩ,1/16W
	R6180	NRSA63J-823X	MG RESISTOR	82kΩ,1/16W
	R6181	NRSA63J-104X	MG RESISTOR	100kΩ,1/16W
	R6182	NRSA63J-473X	MG RESISTOR	47kΩ,1/16W
	R6201	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
	R6202	NRSA63J-181X	MG RESISTOR	180Ω,1/16W
	R6203	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
	R6205	NRSA63J-184X	MG RESISTOR	180kΩ,1/16W
	R6206	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
	R6914	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
	R6931	NRSA63J-4R7X	MG RESISTOR	4.7Ω,1/16W
	R7808	NRSA63J-0R0X	MG RESISTOR	0Ω,1/16W
	RA101	NRZ0038-222X	NETWORK RESISTOR	2.2kΩ
	RA102	NRZ0038-222X	NETWORK RESISTOR	2.2kΩ
	RA103	NRZ0038-222X	NETWORK RESISTOR	2.2kΩ
	RA104	NRZ0038-222X	NETWORK RESISTOR	2.2kΩ
	RA105	NRZ0038-473X	NETWORK RESISTOR	47kΩ
	RA106	NRZ0037-331X	NETWORK RESISTOR	330Ω
	RA107	NRZ0038-222X	NETWORK RESISTOR	2.2kΩ
	RA108	NRZ0038-222X	NETWORK RESISTOR	2.2kΩ
	RA109	NRZ0038-222X	NETWORK RESISTOR	2.2kΩ
	C101	NCF31CZ-104X	CAPACITOR	0.1μF,16V
	C102	NEA71CM-226X	E CAPACITOR	22μF,16V
	C103	NBE41AM-106X	T CAPACITOR	10μF,10V
	C104	NCB31EK-103X	CAPACITOR	0.01μF,25V
	C105	NCB31CK-104X	CAPACITOR	0.1μF,16V
	C106	NCF31CZ-104X	CAPACITOR	0.1μF,16V
	C107	NCB31EK-103X	CAPACITOR	0.01μF,25V
	C108	NBE21AM-225X	T CAPACITOR	2.2μF,10V
	C109	NBE41AM-106X	T CAPACITOR	10μF,10V
	C110	NDC31HJ-101X	CAPACITOR	100pF,50V
	C111	NEA70JM-226X	E CAPACITOR	22μF,6.3V
	C112	NEA70JM-226X	E CAPACITOR	22μF,6.3V
	C113	NCB31EK-103X	CAPACITOR	0.01μF,25V
	C114	NCB31EK-103X	CAPACITOR	0.01μF,25V
	C116	NCB31EK-103X	CAPACITOR	0.01μF,25V
	C118	NCF31CZ-104X	CAPACITOR	0.1μF,16V
	C119	NCB31EK-103X	CAPACITOR	0.01μF,25V
	C120	NCB31EK-103X	CAPACITOR	0.01μF,25V
	C121	NCF31CZ-104X	CAPACITOR	0.1μF,16V
	C122	NCF31CZ-104X	CAPACITOR	0.1μF,16V
	C123	NDC31HJ-100X	CAPACITOR	10pF,50V
	C124	NDC31HJ-100X	CAPACITOR	10pF,50V
	C125	NCB31EK-103X	CAPACITOR	0.01μF,25V
	C126	NDC31HJ-120X	CAPACITOR	12pF,50V

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
C127	NCB31CK-333X	CAPACITOR	0.033μF,16V
C128	NCB21CK-474X	CAPACITOR	0.47μF,16V
C129	NCB31CK-333X	CAPACITOR	0.033μF,16V
C131	NCF31CZ-104X	CAPACITOR	0.1μF,16V
C132	NCF31CZ-104X	CAPACITOR	0.1μF,16V
C133	NCF31CZ-104X	CAPACITOR	0.1μF,16V
C134	NCF31CZ-104X	CAPACITOR	0.1μF,16V
C1201	NBE21AM-106X	T CAPACITOR	10μF,10V
C1202	NBE21AM-106X	T CAPACITOR	10μF,10V
C1203	NCB31EK-223X	CAPACITOR	0.022μF,25V
C1204	NCB31HK-102X	CAPACITOR	0.001μF,50V
C1205	NBE21AM-106X	T CAPACITOR	10μF,10V
C1206	NBE21AM-106X	T CAPACITOR	10μF,10V
C1207	NCB31EK-103X	CAPACITOR	0.01μF,25V
C1601	NCB31EK-103X	CAPACITOR	0.01μF,25V
C1602	NBP41CM-106X	T CAPACITOR	10μF,16V
C1603	NCB31CK-104X	CAPACITOR	0.1μF,16V
C1604	NCB31CK-104X	CAPACITOR	0.1μF,16V
C1605	NCB31CK-104X	CAPACITOR	0.1μF,16V
C1606	NCB31CK-104X	CAPACITOR	0.1μF,16V
C1607	NCB31EK-103X	CAPACITOR	0.01μF,25V
C1608	NCB31CK-104X	CAPACITOR	0.1μF,16V
C1609	NCB31HK-222X	CAPACITOR	0.0022μF,50V
C1610	NCB21CK-334X	CAPACITOR	0.33μF,16V
C1611	NBE41AM-226X	T CAPACITOR	22μF,10V
C1612	NCB31HK-681X	CAPACITOR	680pF,50V
C1613	NCB21CK-474X	CAPACITOR	0.47μF,16V
C1614	NCB31HK-152X	CAPACITOR	0.0015μF,50V
C1615	NBE21AM-106X	T CAPACITOR	10μF,10V
C1616	NCB31HK-822X	CAPACITOR	0.0082μF,50V
C1617	NBP41CM-106X	T CAPACITOR	10μF,16V
C1624	NCB31CK-223X	CAPACITOR	0.022μF,16V
C1625	NCB31CK-223X	CAPACITOR	0.022μF,16V
C1626	NCB31CK-223X	CAPACITOR	0.022μF,16V
C1631	NCB31CK-683X	CAPACITOR	0.068μF,16V
C2001	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C2002	NFV41HJ-183X	MPPS CAPACITOR	0.018μF,50V
C2003	NDC31HJ-331X	CAPACITOR	330pF,50V
C2004	NBE20JM-226X	T CAPACITOR	22μF,6.3V
C2005	NCB21CK-105X	CAPACITOR	1μF,16V
C2009	NBE40JM-226X	T CAPACITOR	22μF,6.3V
C2010	NCB31CK-104X	CAPACITOR	0.1μF,16V
C2021	NCB31EK-103X	CAPACITOR	0.01μF,25V
C2022	NBE20JM-156X	T CAPACITOR	15μF,6.3V
C2023	NCB31CK-104X	CAPACITOR,C	0.1μF,16V
C2024	NCB31HK-222X	CAPACITOR	0.0022μF,50V
C2025	NBP21EM-105X	T CAPACITOR	1μF,25V
C2026	NCB31HK-102X	CAPACITOR	0.001μF,50V
C2027	NCB21CK-474X	CAPACITOR	0.47μF,16V
C2028	NCF21CZ-105X	CAPACITOR	1μF,16V
C2029	NCB21AK-105X	CAPACITOR	1μF,10V
C2030	NBE20JM-475X	T CAPACITOR	4.7μF,6.3V
C2031	NCB21CK-104X	CAPACITOR	0.1μF,16V
C2051	NCB31HK-682X	CAPACITOR	0.0068μF,50V
C2052	NCB31HK-222X	CAPACITOR	0.0022μF,50V
C2061	NCB31CK-104X	CAPACITOR,C	0.1μF,16V
C2062	NCB31CK-104X	CAPACITOR,C	0.1μF,16V
C2071	NCB21AK-105X	CAPACITOR	1μF,10V
C2072	NCB31HK-682X	CAPACITOR	0.0068μF,50V
C2073	NDC31HJ-331X	CAPACITOR	330pF,50V
C2074	NCB31HK-332X	CAPACITOR	0.0033μF,50V
C2076	NCB31CK-104X	CAPACITOR	0.1μF,16V

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
C2401	NEA70GM-476X	E CAPACITOR	47μF,4.0V
C2402	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C2403	NCB31EK-103X	CAPACITOR	0.01μF,25V
C2404	NCF31CZ-224X	CAPACITOR	0.22μF,16V
C2405	NCB31CK-104X	CAPACITOR	0.1μF,16V
C3002	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C3003	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C3004	NCB31CK-104X	CAPACITOR	0.1μF,16V
C3005	NCB31CK-104X	CAPACITOR	0.1μF,16V
C3006	NDC31HG-120X	CAPACITOR	12pF,50V
C3007	NDC31HG-100X	CAPACITOR	10pF,50V
C3009	NCB31CK-104X	CAPACITOR	0.1μF,16V
C3011	NCB31CK-104X	CAPACITOR	0.1μF,16V
C3012	NCB31CK-104X	CAPACITOR	0.1μF,16V
C3013	NCB31CK-104X	CAPACITOR	0.1μF,16V
C3014	NCB31CK-104X	CAPACITOR	0.1μF,16V
C3015	NCB31CK-104X	CAPACITOR	0.1μF,16V
C3016	NCB31CK-104X	CAPACITOR	0.1μF,16V
C3017	NCB31CK-104X	CAPACITOR	0.1μF,16V
C3019	NCB31EK-103X	CAPACITOR	0.01μF,25V
C3020	NCB31EK-103X	CAPACITOR	0.01μF,25V
C3022	NCB31CK-104X	CAPACITOR	0.1μF,16V
C3027	NCB31EK-103X	CAPACITOR	0.01μF,25V
C3028	NCB31EK-103X	CAPACITOR	0.01μF,25V
C3032	NDC31HJ-100X	CAPACITOR	10pF,50V
C3033	NCB31CK-104X	CAPACITOR	0.1μF,16V
C3037	NDC31HJ-100X	CAPACITOR	10pF,50V
C3101	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C3103	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C3104	NDC31HJ-560X	CAPACITOR	56pF,50V
C3105	NCB31CK-104X	CAPACITOR	0.1μF,16V
C3106	NCB31CK-104X	CAPACITOR	0.1μF,16V
C3107	NCB31EK-103X	CAPACITOR	0.01μF,25V
C3108	NCB31EK-103X	CAPACITOR	0.01μF,25V
C3109	NCB31EK-103X	CAPACITOR	0.01μF,25V
C3112	NBE20JM-475X	T CAPACITOR	4.7μF,6.3V
C3113	NCB21AK-105X	CAPACITOR	1μF,10V
C3114	NCB31EK-103X	CAPACITOR	0.01μF,25V
C3115	NCB31EK-103X	CAPACITOR	0.01μF,25V
C3117	NDC31HJ-240X	CAPACITOR	24pF,50V
C3118	NCB31CK-104X	CAPACITOR	0.1μF,16V
C3119	NCB31CK-104X	CAPACITOR	0.1μF,16V
C3120	NEA70GM-337X	E CAPACITOR	330μF,4.0V
C3121	NEA70GM-337X	E CAPACITOR	330μF,4.0V
C3134	NDC31HJ-100X	CAPACITOR	10pF,50V
C3135	NDC31HJ-221X	CAPACITOR	220pF,50V
C3501	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C3502	NCF21CZ-105X	CAPACITOR	1μF,16V
C3503	NCB31EK-103X	CAPACITOR	0.01μF,25V
C3504	NCB31EK-103X	CAPACITOR	0.01μF,25V
C3505	NCB31EK-103X	CAPACITOR	0.01μF,25V
C3506	NCB31EK-103X	CAPACITOR	0.01μF,25V
C3507	NCF21CZ-105X	CAPACITOR	1μF,16V
C3508	NCB31EK-153X	CAPACITOR	0.015μF,25V
C3509	NCB31EK-103X	CAPACITOR	0.01μF,25V
C3510	NCB31HK-332X	CAPACITOR	0.0033μF,50V
C3511	NDC31HJ-150X	CAPACITOR	15pF,50V
C3513	NCB31HK-332X	CAPACITOR	0.0033μF,50V
C3514	NCB31EK-103X	CAPACITOR	0.01μF,25V
C3515	NCB31HK-332X	CAPACITOR	0.0033μF,50V
C3517	NCB31EK-103X	CAPACITOR	0.01μF,25V
C3518	NCB31HK-332X	CAPACITOR	0.0033μF,50V

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
C3520	NCB31HK-332X	CAPACITOR	0.0033µF,50V
C3522	NCB31EK-103X	CAPACITOR	0.01µF,25V
C3523	NCB31HK-332X	CAPACITOR	0.0033µF,50V
C3524	NDC31HJ-150X	CAPACITOR	15pF,50V
C3525	NCB31CK-473X	CAPACITOR	0.047µF,16V
C3901	NCB31CK-104X	CAPACITOR	0.1µF,16V
C4004	NBE20GM-336X	T CAPACITOR	33µF,4.0V
C4006	NCF31EZ-104X	CAPACITOR	0.1µF,25V
C4008	NCF31EZ-104X	CAPACITOR	0.1µF,25V
C4009	NCF31EZ-104X	CAPACITOR	0.1µF,25V
C4010	NCF31EZ-104X	CAPACITOR	0.1µF,25V
C4012	NCF31EZ-104X	CAPACITOR	0.1µF,25V
C4014	NCF31EZ-104X	CAPACITOR	0.1µF,25V
C4017	NCF31EZ-104X	CAPACITOR	0.1µF,25V
C4019	NCF31EZ-104X	CAPACITOR	0.1µF,25V
C4022	NCF31EZ-104X	CAPACITOR	0.1µF,25V
C4024	NCF31EZ-104X	CAPACITOR	0.1µF,25V
C4028	NCF31EZ-104X	CAPACITOR	0.1µF,25V
C4029	NCF31EZ-104X	CAPACITOR	0.1µF,25V
C4030	NCF31EZ-104X	CAPACITOR	0.1µF,25V
C4034	NCF31EZ-104X	CAPACITOR	0.1µF,25V
C4036	NCF31EZ-104X	CAPACITOR	0.1µF,25V
C4037	NCF31EZ-104X	CAPACITOR	0.1µF,25V
C4038	NCF31EZ-104X	CAPACITOR	0.1µF,25V
C4039	NCF31EZ-104X	CAPACITOR	0.1µF,25V
C4040	NBE20GM-336X	T CAPACITOR,C	33µF,4.0V
C4041	NCF31EZ-104X	CAPACITOR,C	0.1µF,25V
C4043	NCF31EZ-104X	CAPACITOR,C	0.1µF,25V
C4044	NBE20GM-336X	T CAPACITOR	33µF,4.0V
C4045	NCF31EZ-104X	CAPACITOR	0.1µF,25V
C4046	NCF21CZ-105X	CAPACITOR	1µF,16V
C4047	NCF31EZ-104X	CAPACITOR	0.1µF,25V
C4048	NBE20GM-336X	T CAPACITOR	33µF,4.0V
C4049	NDC31HJ-100X	CAPACITOR	10pF,50V
C4051	NDC31HJ-101X	CAPACITOR	100pF,50V
C4101	NCB31CK-104X	CAPACITOR	0.1µF,16V
C4102	NCB21CK-105X	CAPACITOR	1µF,16V
C4201	NEA71HM-225X	E CAPACITOR	2.2µF,50V
C4202	NCF31CZ-104X	CAPACITOR	0.1µF,16V
C4203	NCB31CK-104X	CAPACITOR	0.1µF,16V
C4205	NCB31EK-103X	CAPACITOR	0.01µF,25V
C4206	NCB31CK-104X	CAPACITOR	0.1µF,16V
C4207	NCB31EK-103X	CAPACITOR	0.01µF,25V
C4208	NCB31CK-104X	CAPACITOR	0.1µF,16V
C4209	NCF21CZ-105X	CAPACITOR	1µF,16V
C4210	NCF21CZ-105X	CAPACITOR	1µF,16V
C4251	NEA71HM-335X	E CAPACITOR	3.3µF,50V
C4252	NCB31CK-104X	CAPACITOR	0.1µF,16V
C4253	NCB31EK-153X	CAPACITOR	0.015µF,25V
C4254	NCB31EK-153X	CAPACITOR	0.015µF,25V
C4256	NEA71CM-106X	E CAPACITOR	10µF,16V
C4502	NEA71CM-106X	E CAPACITOR	10µF,16V
C4503	NEA70JM-107X	E CAPACITOR	100µF,6.3V
C4504	NCF31CZ-104X	CAPACITOR	0.1µF,16V
C4505	NDC31HJ-330X	CAPACITOR	33pF,50V
C4506	NCB31HK-102X	CAPACITOR	0.001µF,50V
C4507	NCB31HK-102X	CAPACITOR	0.001µF,50V
C4508	NCB31HK-102X	CAPACITOR	0.001µF,50V
C4509	NCB31HK-102X	CAPACITOR	0.001µF,50V
C4510	NCB31CK-104X	CAPACITOR	0.1µF,16V
C4511	NCF31CZ-104X	CAPACITOR	0.1µF,16V
C5203	NBE40GM-336X	T CAPACITOR	33µF,4.0V
C5204	NCF31EZ-104X	CAPACITOR	0.1µF,25V
C5207	NCB31CK-104X	CAPACITOR	0.1µF,16V
C5208	NCB31CK-104X	CAPACITOR	0.1µF,16V
C5209	NCB31CK-104X	CAPACITOR	0.1µF,16V
C5210	NCF31EZ-104X	CAPACITOR	0.1µF,25V
C5211	NCB21CK-105X	CAPACITOR	1µF,16V
C5212	NCB21CK-105X	CAPACITOR	1µF,16V
C5213	NCB31HK-332X	CAPACITOR	0.0033µF,50V
C5214	NCB21CK-105X	CAPACITOR	1µF,16V
C5216	NCF31EZ-104X	CAPACITOR	0.1µF,25V
C5218	NCF31EZ-104X	CAPACITOR	0.1µF,25V
C5219	NBP21CM-685X	T CAPACITOR	6.8µF,16V
C5220	NCF31EZ-104X	CAPACITOR	0.1µF,25V
C5221	NBP41VM-105X	T CAPACITOR	1µF,35V
C5222	NCB31HK-102X	CAPACITOR	0.001µF,50V
C5223	NCF31EZ-104X	CAPACITOR	0.1µF,25V
C5224	NBE40GM-336X	T CAPACITOR	33µF,4.0V
C5225	NCF31EZ-104X	CAPACITOR	0.1µF,25V
C5227	NCB31CK-104X	CAPACITOR	0.1µF,16V
C5228	NCF31EZ-104X	CAPACITOR	0.1µF,25V
C5229	NBP41VM-105X	T CAPACITOR	1µF,35V
C5230	NCB21EK-104X	CAPACITOR	0.1µF,25V
C5232	NDC31HJ-100X	CAPACITOR	10pF,50V
C5233	NDC31HJ-100X	CAPACITOR	10pF,50V
C5234	NDC31HJ-100X	CAPACITOR	10pF,50V
C5235	NDC31HJ-100X	CAPACITOR	10pF,50V
C5236	NDC31HJ-100X	CAPACITOR	10pF,50V
C5237	NDC31HJ-100X	CAPACITOR	10pF,50V
C6001	NCB21CK-105X	CAPACITOR	1µF,16V
C6003	NEA71CM-106X	E CAPACITOR	10µF,16V
C6004	NCB31CK-104X	CAPACITOR	0.1µF,16V
C6005	NCB31CK-104X	CAPACITOR	0.1µF,16V
C6006	NCB31CK-473X	CAPACITOR	0.047µF,16V
C6007	NCF21CZ-105X	CAPACITOR	1µF,16V
C6008	NCB21CK-105X	CAPACITOR	1µF,16V
C6009	NCB31EK-103X	CAPACITOR	0.01µF,25V
C6010	NCF21CZ-105X	CAPACITOR	1µF,16V
C6011	NCB31CK-104X	CAPACITOR	0.1µF,16V
C6012	NCB31HK-272X	CAPACITOR	0.0027µF,50V
C6013	NCB31CK-104X	CAPACITOR	0.1µF,16V
C6014	NCB31HK-561X	CAPACITOR	560pF,50V
C6015	NCB31HK-561X	CAPACITOR	560pF,50V
C6016	NCB31EK-103X	CAPACITOR	0.01µF,25V
C6017	NDC31HJ-101X	CAPACITOR	100pF,50V
C6018	NCB21CK-105X	CAPACITOR	1µF,16V
C6019	NCF21CZ-105X	CAPACITOR	1µF,16V
C6111	NCB21CK-105X	CAPACITOR	1µF,16V
C6113	NCB10JK-106X	CAPACITOR	10µF,6.3V
C6114	NCB31HK-102X	CAPACITOR	0.001µF,50V
C6121	NCB21CK-105X	CAPACITOR	1µF,16V
C6123	NCB10JK-106X	CAPACITOR	10µF,6.3V
C6124	NCB31HK-102X	CAPACITOR	0.001µF,50V
C6125	NEA71CM-106X	E CAPACITOR	10µF,16V
C6131	NCB21CK-105X	CAPACITOR	1µF,16V
C6132	NCB21CK-105X	CAPACITOR	1µF,16V
C6133	NCB21EK-683X	CAPACITOR	0.068µF,25V
C6141	NCB21CK-105X	CAPACITOR	1µF,16V
C6142	NCB21CK-105X	CAPACITOR	1µF,16V
C6143	NCB21CK-224X	CAPACITOR	0.22µF,16V
C6151	NCB21CK-105X	CAPACITOR	1µF,16V
C6153	NCB10JK-106X	CAPACITOR	10µF,6.3V
C6154	NCB31HK-472X	CAPACITOR	0.0047µF,50V

# ⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	C6155	NCB21CK-105X	CAPACITOR	1µF,16V
	C6161	NCB21CK-105X	CAPACITOR	1µF,16V
	C6162	NCB11EK-105X	CAPACITOR	1µF,25V
	C6163	NCB31HK-102X	CAPACITOR	0.001µF,50V
	C6164	NCB31EK-103X	CAPACITOR	0.01µF,25V
	C6165	NCB21CK-105X	CAPACITOR	1µF,16V
	C6167	NCB21CK-105X	CAPACITOR	1µF,16V
	C6168	NCB11EK-105X	CAPACITOR	1µF,25V
	C6169	NCB21CK-105X	CAPACITOR	1µF,16V
	C6171	NCB21CK-105X	CAPACITOR	1µF,16V
	C6173	NCB21CK-105X	CAPACITOR	1µF,16V
	C6174	NCB21CK-105X	CAPACITOR	1µF,16V
	C6175	NCB21CK-105X	CAPACITOR	1µF,16V
	C6201	NEA71CM-106X	E CAPACITOR	10µF,16V
	C7809	NBE41AM-106X	T CAPACITOR	10µF,10V
	C7810	NDC31HJ-100X	CAPACITOR	10pF,50V
	C7811	NDC31HJ-100X	CAPACITOR	10pF,50V
	C7812	NDC31HJ-100X	CAPACITOR	10pF,50V
	L101	NQL034K-330X	COIL	33µH
	L102	NQR0199-004X	FERRITE BEAD	
	L103	NQR0199-004X	FERRITE BEAD	
	L501	NQR0129-002X	FERRITE BEAD	
	L2001	NQL144K-101X	COIL	100µH
	L2002	NQL144K-101X	COIL	100µH
	L2003	NQL144K-470X	COIL	47µH
	L2051	NQL093K-1R0X	COIL	1µH
	L2052	NQL093K-1R0X	COIL	1µH
	L2401	NQL144K-470X	COIL	47µH
	L3002	NQL315K-220X	COIL	22µH
	L3003	NQL315K-220X	COIL	22µH
	L3101	NQL315K-220X	COIL	22µH
	L3104	NQL184J-560X	COIL	56µH
	L3106	NQL085J-5R6X	COIL	5.6µH
	L3501	NQL315K-220X	COIL	22µH
	L3502	NQL315K-220X	COIL	22µH
	L3901	NQL085J-1R5X	COIL	1.5µH
	L4001	NQL314K-220X	COIL	22µH
	L4002	NRS181J-0R0X	MG RESISTOR	0Ω,1/8W
	L4003	NQL314K-220X	COIL	22µH
	L4004	NQL314K-220X	COIL,C	22µH
	L4201	NQL315K-220X	COIL	22µH
	L4501	NQL315K-100X	COIL	10µH
	L4502	NQL034K-220X	COIL	22µH
	L4503	NQL315K-220X	COIL	22µH
	L5201	NQL314K-220X	COIL	22µH
	L5202	NQL314K-101X	COIL	100µH
	L5203	NQL314K-101X	COIL	100µH
	L5204	NQL314K-220X	COIL	22µH
	L6001	NQLZ011-4R7X	COIL	4.7µH
	L6002	NQLZ011-4R7X	COIL	4.7µH
	L6111	NQLZ011-390X	COIL	39µH
	L6121	NQLZ011-390X	COIL	39µH
	L6131	NQLZ011-470X	COIL	47µH
	L6141	NQLZ011-470X	COIL	47µH
	L6151	NQLZ011-470X	COIL	47µH
	L6161	NQLZ011-221X	COIL	220µH
	L7801	NQL144K-100X	COIL	10µH
	FL4101	NQR0005-001X	LC TRAP	
	FL4102	NQR0268-001X	BAND PASS FILTER	
	X101	NAX0251-001X	CRYSTAL RESONATOR	
	X102	NAX0325-001X	CRYSTAL RESONATOR	
	X3001	QAX0596-001	CRYSTAL RESONATOR	
	SW503	NSW0092-001X	SLIDE SWITCH	
	WR1	WJV0019-001B	E-PRIMARY WIRE	
	J502	YQ32092-3	BATTERY TERMINAL UNIT	
	J503	PEMC1203	MINI JACK	
	J504	LY31356-002A	JACK UNIT	
	J505	QND0068-001	S JACK	
	CN1	QGF0507F1-10X	FPC CONNECTOR	
	CN2	QGF0510F2-14X	FPC CONNECTOR	
	CN3	QGF0507F1-18X	FPC CONNECTOR	
	CN4	QGA1201F2-02X	CONNECTOR	
	CN5	QGF0507F1-11X	FPC CONNECTOR	
	CN7	QGF0507F2-11X	FPC CONNECTOR	
	CN8	QGA1201C2-02X	CONNECTOR	
	CN12	QGA1201F2-05X	CONNECTOR	
	CN13	QGF0507F1-10X	FPC CONNECTOR	
	CN14	QGA1201C2-02X	CONNECTOR	
	CN15	QGF0512C1-22X	FPC CONNECTOR	
	CN16	QGF0303F1-27W	FFC/FPC CONNECTOR	
	CN18	QGF0510F2-14X	FPC CONNECTOR	
	CN22	QGF0505F2-14X	FPC CONNECTOR	
	CN25	QGB0801M1-20X	CONNECTOR	
	CN26	QGA1201C2-02X	CONNECTOR	
	CN27	QGA1201F2-02X	CONNECTOR	
⚠	F6001	NMFZ006-2R0X-K	FUSE	T2.0A
⚠	F6003	NMFZ006-R50X-K	FUSE	T0.5A
	OT1	LY41185-001B	SHIELD CASE(L)	
	SD1	LY41713-001A	SHIELD PLATE	
	SD2	LY41473-001A	SHIELD PLATE	
	OT1	LY41185-001B	SHIELD CASE(L)	

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CCD BOARD ASSEMBLY <02>

REF No.	PART No.	PART NAME, DESCRIPTION	
PW	YB20846B-01	CCD BOARD ASSY	
Q5301	2SC3931/CD/-X	TRANSISTOR	
R5301	NRSA02J-105X	MG RESISTOR	1MΩ,1/10W
R5302	NRSA02J-562X	MG RESISTOR	5.6kΩ,1/10W
R5303	NRSA02J-0R0X	MG RESISTOR	0Ω,1/10W
R5304	NRSA02J-105X	MG RESISTOR	1MΩ,1/10W
C5301	NCF21EZ-104X	CAPACITOR	0.1µF,25V
C5302	NBP21EM-155X	T CAPACITOR	1.5µF,25V
C5303	NCB21HK-102X	CAPACITOR	0.001µF,50V
C5304	NCF21EZ-104X	CAPACITOR	0.1µF,25V
C5305	NDC21HJ-270X	CAPACITOR	27pF,50V

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MONITOR BOARD ASSEMBLY <07>

REF No.	PART No.	PART NAME, DESCRIPTION
PW	YB20868C	MONITOR BOARD ASSY,A,B
	YB20868D	MONITOR BOARD ASSY,C
IC7601	AN2545NFHQ	IC
IC7602	AT25040N-10SC-X	IC
IC7603	BA15532F	IC
Q7501	2SC3647/ST/-X	POW TRANSISTOR

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
Q7502	2SC3647/ST/-X	POW TRANSISTOR	
Q7503	DTA144EE	TRANSISTOR	
Q7504	2SC4617/QR/-X	TRANSISTOR	
Q7505	2SC4617/QR/-X	TRANSISTOR	
Q7506	2SC4617/QR/-X	TRANSISTOR	
Q7605	DTA144EE	TRANSISTOR,C	
Q7608	2SC4617/QR/-X	TRANSISTOR,A,B	
Q7609	2SA1774/QR/-X	TRANSISTOR,A,B	
Q7610	DTC144WE	TRANSISTOR,C	
D7601	RB471E	SB DIODE	
R7501	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R7502	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R7503	NRSA63J-102X	MG RESISTOR	1kΩ,1/16W
R7504	NRSA63J-563X	MG RESISTOR	56kΩ,1/16W
R7505	NRSA63J-223X	MG RESISTOR	22kΩ,1/16W
R7506	NRSA63J-473X	MG RESISTOR	47kΩ,1/16W
R7507	NRSA63J-473X	MG RESISTOR	47kΩ,1/16W
R7508	NRSA63J-223X	MG RESISTOR	22kΩ,1/16W
R7509	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R7510	NRSA63J-563X	MG RESISTOR	56kΩ,1/16W
R7601	NRSA63J-101X	MG RESISTOR	100Ω,1/16W
R7602	NRSA63J-101X	MG RESISTOR	100Ω,1/16W
R7603	NRSA63J-101X	MG RESISTOR	100Ω,1/16W
R7604	NRSA63J-100X	MG RESISTOR	10Ω,1/16W
R7605	NRSA63J-100X	MG RESISTOR	10Ω,1/16W
R7606	NRSA63J-100X	MG RESISTOR	10Ω,1/16W
R7607	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R7608	NRSA63J-153X	MG RESISTOR	15kΩ,1/16W
R7610	NRSA63J-561X	MG RESISTOR	560Ω,1/16W
R7623	NRSA63J-101X	MG RESISTOR	100Ω,1/16W
R7631	NRSA63J-243X	MG RESISTOR	24kΩ,1/16W
R7632	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R7633	NRSA63J-393X	MG RESISTOR	39kΩ,1/16W
R7634	NRSA63J-822X	MG RESISTOR	8.2kΩ,1/16W
R7635	NRVA63D-223X	CMF RESISTOR	22kΩ,1/16W
R7636	NRVA63D-392X	CMF RESISTOR	3.9kΩ,1/16W
R7637	NRVA63D-333X	CMF RESISTOR	33kΩ,1/16W
R7638	NRSA63J-153X	MG RESISTOR	15kΩ,1/16W
R7639	NRSA63J-103X	MG RESISTOR,A,B	10kΩ,1/16W
	NRSA63J-472X	MG RESISTOR,C	4.7kΩ,1/16W
R7640	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R7641	NRSA63J-103X	MG RESISTOR	10kΩ,1/16W
R7644	NRSA63J-683X	MG RESISTOR	68kΩ,1/16W
R7646	NRSA63J-103X	MG RESISTOR,A,B	10kΩ,1/16W
R7647	NRSA63J-222X	MG RESISTOR,A,B	2.2kΩ,1/16W
R7651	NRSA63J-223X	MG RESISTOR,C	22kΩ,1/16W
R7652	NRSA63J-223X	MG RESISTOR,C	22kΩ,1/16W
R7653	NRSA63J-223X	MG RESISTOR,C	22kΩ,1/16W
R7654	NRSA63J-223X	MG RESISTOR,C	22kΩ,1/16W
R7655	NRSA63J-0R0X	MG RESISTOR,A,B	0Ω,1/16W
R7656	NRSA63J-0R0X	MG RESISTOR,C	0Ω,1/16W
R7657	NRSA63J-0R0X	MG RESISTOR,A,B	0Ω,1/16W
R7658	NRSA63J-0R0X	MG RESISTOR,C	0Ω,1/16W
C7501	NCZ1021-270X	CAPACITOR	27pF,2kV
C7502	NCZ1021-270X	CAPACITOR	27pF,2kV
C7503	NFV41HJ-333X	MPPS CAPACITOR	0.033μF,50V
C7504	NCB31EK-103X	CAPACITOR	0.01μF,25V
C7505	NBE40JM-226X	T CAPACITOR	22μF,6.3V
C7506	NCB31EK-103X	CAPACITOR	0.01μF,25V
C7507	NDC31HJ-151X	CAPACITOR	150pF,50V
C7508	NCB11CK-105X	CAPACITOR	1μF,16V
C7509	NCB31CK-104X	CAPACITOR	0.1μF,16V

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
C7510	NCB31HK-562X	CAPACITOR	0.0056μF,50V
C7601	NCB31CK-104X	CAPACITOR	0.1μF,16V
C7602	NCB31CK-104X	CAPACITOR	0.1μF,16V
C7603	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C7604	NBE21AM-475X	T CAPACITOR	4.7μF,10V
C7605	NCB11CK-225X	CAPACITOR	2.2μF,16V
C7606	NCB31CK-104X	CAPACITOR	0.1μF,16V
C7607	NCB11CK-225X	CAPACITOR	2.2μF,16V
C7608	NCB11CK-225X	CAPACITOR	2.2μF,16V
C7609	NCB31HK-103X	CAPACITOR	0.01μF,50V
C7610	NBE41AM-106X	T CAPACITOR	10μF,10V
C7611	NCB31HK-103X	CAPACITOR	0.01μF,50V
C7612	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C7613	NBE20JM-225X	T CAPACITOR	2.2μF,6.3V
C7614	NCB31HK-152X	CAPACITOR	0.0015μF,50V
C7615	NCB31HK-103X	CAPACITOR	0.01μF,50V
C7616	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C7617	NBE40JM-226X	T CAPACITOR	22μF,6.3V
C7618	NCB31HK-103X	CAPACITOR	0.01μF,50V
C7619	NCB31HK-681X	CAPACITOR	680pF,50V
C7620	NBE20JM-475X	T CAPACITOR	4.7μF,6.3V
C7621	NCB30JK-105X	CAPACITOR	1μF,6.3V
C7626	NCB31HK-102X	CAPACITOR	0.001μF,50V
C7631	NCB31HK-102X	CAPACITOR	0.001μF,50V
C7632	NCF31CZ-104X	CAPACITOR	0.1μF,16V
C7641	NDC31HJ-330X	CAPACITOR	33pF,50V
C7642	NCB31CK-104X	CAPACITOR	0.1μF,16V
C7643	NCF31CZ-104X	CAPACITOR	0.1μF,16V
C7644	NCB31CK-104X	CAPACITOR	0.1μF,16V
C7645	NBP41EM-475X	T CAPACITOR	4.7μF,25V
C7646	NCB31HK-103X	CAPACITOR	0.01μF,50V
C7647	NBP41EM-475X	T CAPACITOR	4.7μF,25V
C7648	NBP21CM-225X	T CAPACITOR	2.2μF,16V
C7649	NBE21AM-106X	T CAPACITOR	10μF,10V
C7651	NCB31HK-103X	CAPACITOR	0.01μF,50V
C7652	NBP41EM-475X	T CAPACITOR	4.7μF,25V
C7653	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C7654	NCB31HK-103X	CAPACITOR	0.01μF,50V
C7655	NBP41EM-475X	T CAPACITOR	4.7μF,25V
C7656	NCB31HK-103X	CAPACITOR	0.01μF,50V
C7657	NBE20JM-106X	T CAPACITOR	10μF,6.3V
C7658	NCB31HK-103X	CAPACITOR	0.01μF,50V
C7659	NCB31CK-104X	CAPACITOR,C	0.1μF,16V
L7501	NQLZ010-680X	COIL	68μH
L7502	NQLZ010-220X	COIL	22μH
L7601	NQL144K-220X	COIL	22μH
L7602	NQL144K-220X	COIL	22μH
L7603	NQL144K-220X	COIL	22μH
L7607	NQL144K-220X	COIL	22μH
L7610	NQL144K-220X	COIL,A,B	22μH
L7611	NQL144K-220X	COIL	22μH
L7612	NQL144K-220X	COIL	22μH
L7613	NQL144K-220X	COIL,C	22μH
L7614	NQL144K-220X	COIL	22μH
⚠ T7501	NQS0030-001	SW TRANSF	
CN7501	QGF0505F2-24X	FPC CONNECTOR	
CN7502	QGF0501F1-24X	FPC CONNECTOR	
CN7503	QGA5002F1-02X	CONNECTOR	
OT1	LY41084-001B	EARTH PLATE	

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E.VF BOARD ASSEMBLY <50>

# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION	
PW	PTY20307-601	E.VF BOARD ASSY	
⚠ FBT1	PTY20307-550	FLY BACK TRANS	
HLC1	PTY20307-560	H.COIL	
IC1	BA7149F	IC	
Q1	2SA1576A	TRANSISTOR,TR1	
Q2	2SC4132	TRANSISTOR,TR2	
Q3	2SC4098	TRANSISTOR,TR3	
D1	RLS245	DIODE	
D2	MA143A	DIODE	
R1	YQ31803-501	RESISTOR	9.1kΩ,1/10W
R2	QRSA08G-333YN	RESISTOR	33kΩ,1/10W
R3	QRSA08J-3R9YN	RESISTOR	3.9Ω,1/10W
R4	QRSA08J-390YN	RESISTOR	39Ω,1/10W
R5	YU30595-111	RESISTOR	390Ω,1/10W
R6	YU30595-113	RESISTOR	91kΩ,1/10W
R7	QRSA08J-103YN	RESISTOR	10kΩ,1/10W
R8	YQ31803-502	RESISTOR	2.2kΩ,1/10W
R9	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
VR1	PTY20307-504	V RESISTOR,V SIZE	
VR2	PTY20307-505	V RESISTOR,H HOLD	
VR4	PTY20307-506	V RESISTOR,BRIGHT	
R10	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R11	QRSA08J-330YN	RESISTOR	33Ω,1/10W
R12	QRSA08J-113YN	RESISTOR	11kΩ,1/10W
R13	YQ31803-503	RESISTOR	3.9kΩ,1/10W
R14	QRSA08J-822YN	RESISTOR	8.2kΩ,1/10W
R15	QRSA08J-182YN	RESISTOR	1.8kΩ,1/10W
R16	QRSA08J-332YN	RESISTOR	3.3kΩ,1/10W
R17	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R18	QRSA08J-471YN	RESISTOR	470Ω,1/10W
R19	QRSA08F-103YN	RESISTOR	10kΩ,1/10W
R20	QRSA08F-152YN	RESISTOR	1.5kΩ,1/10W
R21	QRSA08J-275YN	RESISTOR	2.7MΩ,1/10W
R22	QRSA08J-275YN	RESISTOR	2.7MΩ,1/10W
R23	QRSA08J-105YN	RESISTOR	1MΩ,1/10W
R24	QRSA08J-154YN	RESISTOR	150kΩ,1/10W
R25	QRSA08J-1R5YN	RESISTOR	1.5Ω,1/10W
R27	QRSA08J-102YN	RESISTOR	1kΩ,1/10W
R28	QRSA08J-121YN	RESISTOR	120Ω,1/10W
C1	YQ31803-507	CAPACITOR	0.22µF,16V
C2	NCF21CZ-105X	CAPACITOR	1µF,16V
C3	NCB21HK-152X	CAPACITOR	0.0015µF,50V
C4	NCF21CZ-105X	CAPACITOR	1µF,16V
C5	QEDP1AM-227	E CAPACITOR	220µF,10V
C6	QEDP1AM-227	E CAPACITOR	220µF,10V
C7	QEDP1AM-227	E CAPACITOR	220µF,10V
C8	NCF21CZ-105X	CAPACITOR	1µF,16V
C9	NDC21HJ-101X	CAPACITOR	100pF,50V
C10	NCB21HK-473X	CAPACITOR	0.047µF,50V
C11	QER61HM-106	E CAPACITOR	10µF,50V
C12	PTY20307-508	F CAPACITOR	4700pF
C13	YQ31304-506	E CAPACITOR	100µF,10V
C14	YQ31304-507	CAPACITOR	1500pF,630V
L1	YQ30723-115	COIL	100µH
TH1	YU30236-110	THERMISTOR	
WR1	PTY20307-580	WIRE,CN1-MAIN CN12	
CN2	PTY20307-571	CONNECTOR	

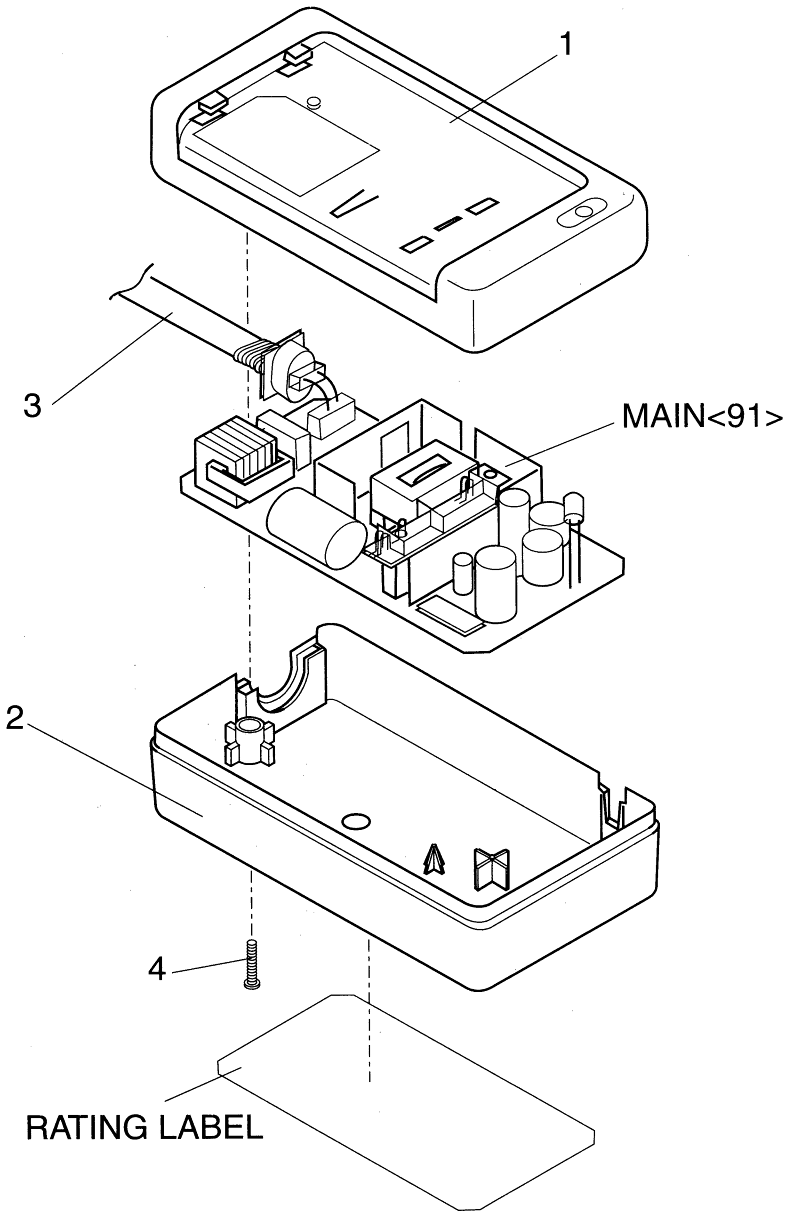
# ⚠ REF No.	PART No.	PART NAME, DESCRIPTION

SECTION 6
AC POWER ADAPTER (AA-V16EG/EK)

SAFETY PRECAUTION

Parts identified by the ⚠ symbol are critical for safety. Replace only with specified part numbers.

6.1 CABINET ASSEMBLY <MA>

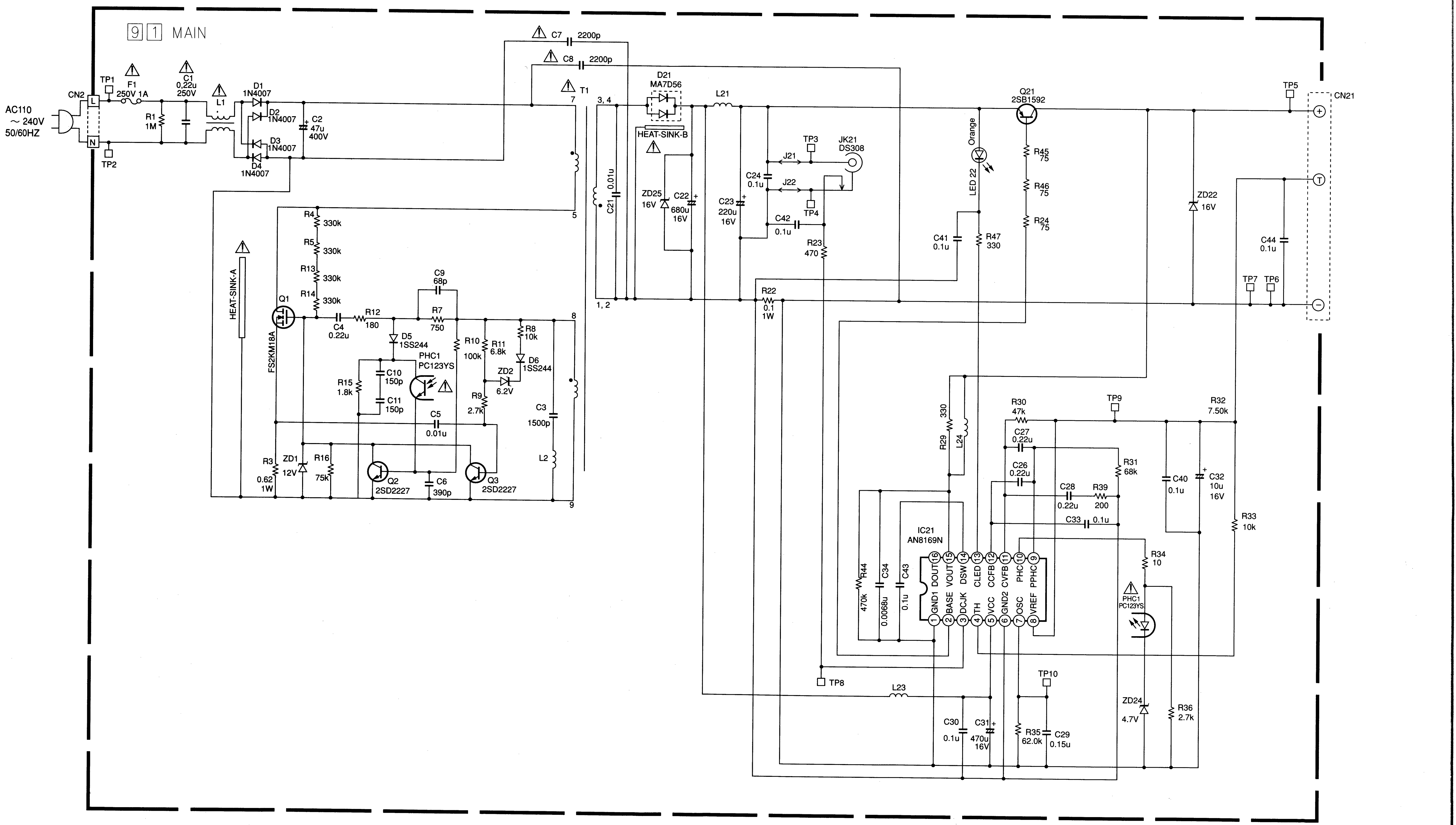


#⚠REF No.	PART No.	PART NAME, DESCRIPTION
**************************************		
		CABINET ASSEMBLY <MA>
⚠ 1	PTY20538-012	UPPER CASE ASSY
⚠ 2	PTY20583-022	LOWER CASE
⚠ 3	YQ10531-006	POWER CORD, For EG
⚠	PTY20080-034	POWER CORD, For EK
4	YQ10531-011	SCREW

6.2 SCHEMATIC DIAGRAM

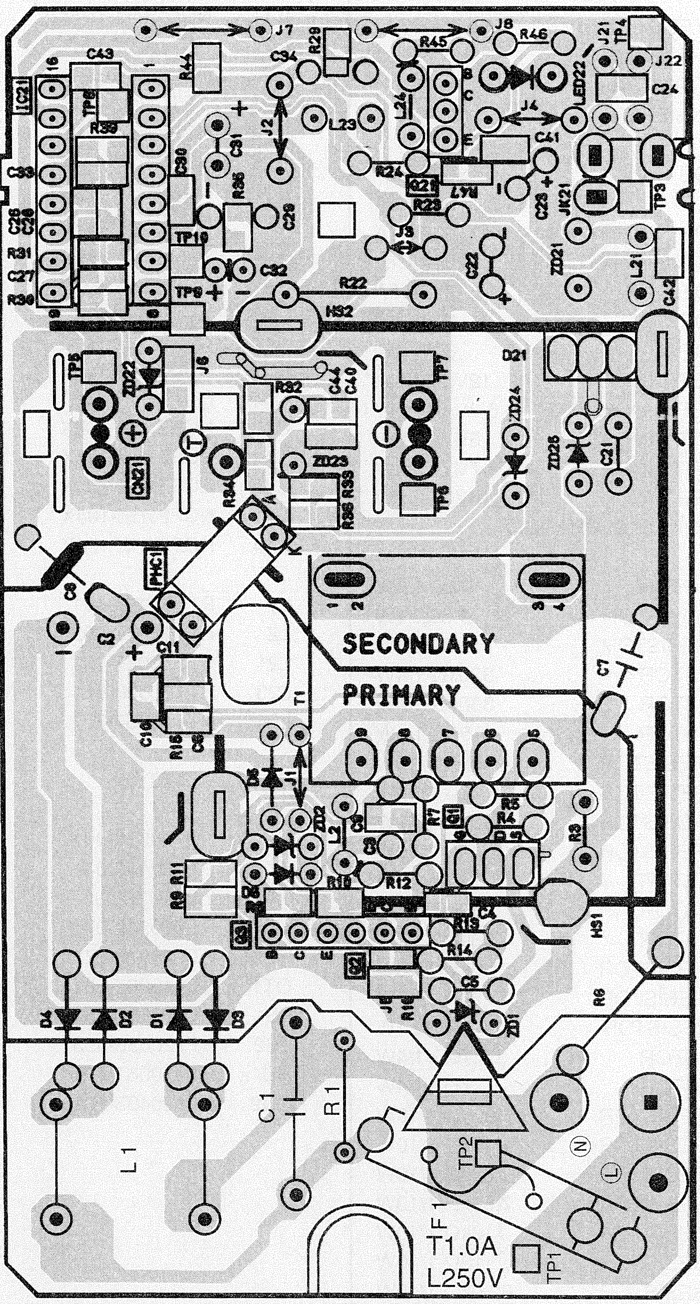
NOTE: *When ordering parts, be sure to order according to the Part Number indicated in the Parts List.*

Safety precautions
The components identified by the symbol ⚠ are critical for safety. For continued safety, replace safety critical components only with manufacturer's recommended parts.



9 1 MAIN
AC110 ~ 240V 50/60HZ
CN2
L
N
TP1
TP2
F1 250V 1A
R1 1M
C1 0.22u 250V
L1
D1 1N4007
D2 1N4007
D3 1N4007
D4 1N4007
C2 47u 400V
C7 2200p
C8 2200p
T1
7
3, 4
5
1, 2
8
9
C21 0.01u
D21 MA7D56
HEAT-SINK-B
ZD25 16V
C22 680u 16V
L21
C23 220u 16V
C24 0.1u
J21
J22
TP3
TP4
JK21 DS308
C42 0.1u
R23 470
R22 0.1 1W
HEAT-SINK-A
Q1 FS2KM18A
R4 330k
R5 330k
R13 330k
R14 330k
C9 68p
R12 180
C4 0.22u
R7 750
D5 1SS244
PHC1 PC123YS
R10 100k
R11 6.8k
R8 10k
D6 1SS244
ZD2 6.2V
R9 2.7k
R15 1.8k
C10 150p
C11 150p
C5 0.01u
C3 1500p
L2
R3 0.62 1W
ZD1 12V
R16 75k
Q2 2SD2227
C6 390p
Q3 2SD2227
Orange
LED 22
Q21 2SB1592
R45 75
R46 75
R24 75
C41 0.1u
R47 330
ZD22 16V
TP5
CN21
+
T
−
C44 0.1u
TP7
TP6
R29 330
L24
R30 47k
TP9
R32 7.50k
C27 0.22u
C26 0.22u
R31 68k
C28 0.22u
R39 200
C33 0.1u
C40 0.1u
C32 10u 16V
R33 10k
IC21 AN8169N
R44 470k
C34 0.0068u
C43 0.1u
16 DOUT
15 VOUT
14 DSW
13 CLED
12 CCFB
11 CVFB
10 PHC
9 PPHC
1 GND1
2 BASE
3 DCJK
4 TH
5 VCC
6 GND2
7 OSC
8 VREF
R34 10
PHC1 PC123YS
TP8
L23
TP10
C30 0.1u
C31 470u 16V
R35 62.0k
C29 0.15u
ZD24 4.7V
R36 2.7k
A
B
C
D
E
F
G
1
2
3
4
5

6.3 CIRCUIT BOARD


J7
J8
R46
J21
TP4
J22
C43
IC21
TP8
R39
C33
R26
R31
C27
R30
R44
C34
R29
R45
L24
LED22
C24
J4
C41
C31
J2
L23
C30
R35
C28
TP10
TP9
C32
R22
HS2
R24
Q21
R47
R23
C23
JK21
TP3
J3
C22
ZD21
L21
C42
D21
TP5
ZD22
J6
R32
C44
C40
TP7
ZD24
ZD25
C21
CN21
R34
ZD23
R38
R36
TP6
PHC1
C8
C2
C11
SECONDARY
PRIMARY
T1
C7
C10
R16
C6
D5
J1
ZD2
C9
R17
Q1
R5
R4
R3
R9
R11
R8
D6
R18
R12
R13
C4
HS1
Q3
R14
Q2
C5
R6
R10
ZD1
D4
D2
D1
D3
C1
R1
L1
TP2
F1
T1.0A
L250V
TP1
N
L

6.4 ELECTRICAL PARTS LIST

MAIN BOARD ASSEMBLY <91>

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
⚠	PW1	PTY20538-502	MAIN BOARD ASSY	
	IC21	AN8169N	IC	
	Q1	FS2KM18A	MOS FET	
	Q2	2SD2227	TRANSISTER	
	Q3	2SD2227	TRANSISTER	
	Q21	2SB1592	TRANSISTER	
	D1	1N4007	DIODE	1000V 1A
	D2	1N4007	DIODE	1000V 1A
	D3	1N4007	DIODE	1000V 1A
	D4	1N4007	DIODE	1000V 1A
	D5	1SS244T77	DIODE	200V 6A
	D6	1SS244T77	DIODE	200V 6A
	D21	MA7D56	DIODE	60V 10A
	ZD1	MTZJ12C-T2	ZENER DIODE	12V 500mW
	ZD2	MTZJ6.2B-T2	ZENER DIODE	6.2V 500mW
	ZD22	MTZJ16T-77	ZENER DIODE	16V 500mW
	ZD24	MA4047NM	ZENER DIODE	4.7V 500mW
	ZD25	MTZJ16T-77	ZENER DIODE	16V 500mW
	LED22	YQ10531-541	LED,ORANGE CHARGE	
	R1	QRN141J-105Y	RESISTOR	1MΩ 1/4W
	R3	PTY10067-601	MF RESISTOR	0.62Ω 1W
	R3	PTY10067-601	MF RESISTOR	0.62Ω 1W
	R4	QRE141J-334Y	RESISTOR	330kΩ 1/4W
	R5	QRE141J-334Y	RESISTOR	330kΩ 1/4W
	R7	QRE141J-751Y	RESISTOR	750Ω 1/4W
	R8	NRSA02J-103X	MG RESISTOR	10kΩ 1/10W
	R9	NRSA02J-272X	MG RESISTOR	2.7kΩ 1/10W
	R10	NRSA02J-104X	MG RESISTOR	100kΩ 1/10W
	R11	NRSA02J-682X	MG RESISTOR	6.8kΩ 1/10W
	R12	QRE141J-181Y	RESISTOR	180Ω 1/4W
	R13	QRE141J-334Y	RESISTOR	330kΩ 1/4W
	R14	QRE141J-334Y	RESISTOR	330kΩ 1/4W
	R15	NRSA02J-182X	MG RESISTOR	1.8kΩ 1/10W
	R16	NRSA02J-753X	MG RESISTOR	75kΩ 1/10W
	R22	QRZ0192-R10X	MF RESISTOR	0.1Ω 1W
	R23	QRE141J-471Y	RESISTOR	470Ω 1/4W
	R24	QRE141J-750Y	RESISTOR	75Ω 1/4W
	R29	NRSA02J-331X	MG RESISTOR	330Ω 1/10W
	R30	NRSA02J-473X	MG RESISTOR	47kΩ 1/10W
	R31	NRSA02J-683X	MG RESISTOR	68kΩ 1/10W
	R32	PTY10067-614	MG RESISTOR	7.50kΩ 1/10W
	R33	NRSA02J-103X	MG RESISTOR	10kΩ 1/10W
	R34	NRSA02J-100X	MG RESISTOR	10Ω 1/10W
	R35	PTY20538-601	MG RESISTOR	62.0kΩ 1/10W
	R36	NRSA02J-272X	MG RESISTOR	2.7kΩ 1/10W
	R39	NRSA02J-201X	MG RESISTOR	200Ω 1/10W
	R44	NRSA02J-474X	MG RESISTOR	470kΩ 1/10W
	R45	QRE141J-750Y	RESISTOR	75Ω 1/4W
	R46	QRE141J-750Y	RESISTOR	75Ω 1/4W
	R47	NRSA02J-331X	MG RESISTOR	330Ω 1/10W
⚠	C1	QFZ9073-224	F CAPACITOR	0.22μF 250V
	C2	YQ10626-402	E CAPACITOR	47μF 400V

#⚠	REF No.	PART No.	PART NAME, DESCRIPTION	
	C3	PTY10067-651	CAPACITOR	1500pF 250V
	C4	NCB21CK-224X	CAPACITOR	0.22μF 16V
	C5	QFLC1HJ-103Z	F CAPACITOR	0.01μF 50V
	C6	NCB21HK-391X	CAPACITOR	390pF 50V
⚠	C7	PTY20538-611	CAPACITOR	2200pF250V
⚠	C8	PTY20538-611	CAPACITOR	2200pF 250V
	C9	NDC21HJ-680X	CAPACITOR	68pF 50V
	C10	NDC21HJ-151X	CAPACITOR	150pF 50V
	C11	NDC21HJ-151X	CAPACITOR	150pF 50V
	C21	PTY10067-657	CAPACITOR	0.01μF 250V
	C22	PTY20292-321	E CAPACITOR	680μF 16V
	C23	QETL1CM-227	E CAPACITOR	220μF 16V
	C24	NCF21EZ-104X	CAPACITOR	0.1μF 25V
	C26	NCB21CK-224X	CAPACITOR	0.22μF 16V
	C27	NCB21CK-224X	CAPACITOR	0.22μF 16V
	C28	NCB21CK-224X	CAPACITOR	0.22μF 16V
	C29	QFLA1HJ-154	F CAPACITOR	0.15μF 50V
	C30	NCB21EK-104X	CAPACITOR	0.1μF 25V
	C31	QETL1CM-477	E CAPACITOR	470μF 16V
	C32	QETA1CM-106	E CAPACITOR	10μF 16V
	C33	NCB21EK-104X	CAPACITOR	0.1μF 25V
	C34	PTY10067-662	CAPACITOR	0.0068μF 50V
	C40	NCB21EK-104X	CAPACITOR	0.1μF 25V
	C41	NCF21HZ-104X	CAPACITOR	0.1μF 50V
	C42	NCF21HZ-104X	CAPACITOR	0.1μF 50V
	C43	NCF21HZ-104X	CAPACITOR	0.1μF 50V
	C44	NCF21HZ-104X	CAPACITOR	0.1μF 50V
⚠	L1	PTY20450-401	LINE FILTER	
	L2	PTY10067-702	BEAD INDUCTOR	
	L21	PTY10067-703	COIL	
	L23	PTY20538-811	BEAD INDUCTOR	
	L24	PTY10067-707	BEAD INDUCTOR	
⚠	PHC1	PC123YS	PHOTO COUPLER	
⚠	T1	PTY20538-801	SW TRANS	
⚠	F1	PTY20450-041	FUSE	1A 250V
	JK21	YQ21032-301	DC JACK	
⚠	HS1	PTY20538-071	HEAT SINK A	
⚠	HS2	PTY20538-072	HEAT SINK B	
	OT1	PTY10067-551	SCREW,X2	
	TB1	PTY20538-052	TERMINAL 1, X2	
	TB2	PTY20538-053	TERMINAL 2, X3	
	HD1	PTY10067-571	TERMINAL HOLDER	
	CN2	PTY20483-102	CONNECTOR	